

# JACKSON STATE UNIVERSITY®

## 2019-2021 Graduate Catalog

Jackson, Mississippi 39217  
Volume XXI, Number 1  
(May 2019)

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Jackson State University is committed to the principles of equal education opportunity, equal employment, and affirmative action. The University does not discriminate on the basis of race, color, sex, disability, age, religion, national origin, veteran status, or on any other illegal basis.

Jackson State University is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award baccalaureate, master's, specialist, and doctoral degrees. Contact the Southern Association of Colleges and Schools Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of Jackson State University.

Second-class postage paid at Jackson, Mississippi 39217. The official mailing address for the University is as follows:  
1400 John R. Lynch Street, Jackson, Mississippi 39217, telephone number (601) 979-2121.  
JSU's Internet homepage address is: [www.jsums.edu](http://www.jsums.edu)

## Table of Contents

	Page
Directory.....	4
The University.....	5
Mission/Vision Statements .....	5
Statement of Core Values .....	5
History of the University .....	5
Accreditations and Memberships .....	7
The Graduate School .....	8
Graduate Admission.....	9
Graduate Student Support.....	12
Tuition and Fees .....	15
Academic Regulations .....	15
Candidacy and Graduation Requirements.....	19
General Statements .....	22
Student Participation in Institutional Governance .....	23
Disability Services Center and ADA Compliance.....	23
Residence Requirements .....	24
Graduate Programs in Which Degrees Are Offered .....	25
Research Organizations, Academic and Community Services.....	26
University Libraries .....	26
JSU Global.....	26
Office of Research and Economic Development.....	28
University Communications .....	31
Latasha Norman Center for Counseling.....	32
Institutional Assessment .....	33
College of Business .....	35
Master of Professional Accountancy .....	37
Master of Business Administration .....	37
Master of Business Administration – Online.....	38
Doctoral Program in Business .....	41
College of Education and Human Development/School of Life Long Learning.....	51
Department of Counseling, Rehabilitation & Psychometric Services .....	53
Department of Educational Administration, Foundations, and Leadership .....	59
Department of Educational, Multicultural, and Exceptional Studies .....	75
Department of Elementary and Early Childhood Education .....	82
Department of Executive Ph.D. in Urban Higher Education .....	90
Department of Health, Physical Education and Recreation .....	94
College of Liberal Arts.....	98
School of Communications.....	99
Department of English, Foreign Languages, and Speech Communication.....	99
Department of Journalism and Media Studies .....	105
School of Fine and Performing Arts .....	108
Department of Music .....	108
School of Social and Behavioral Sciences .....	113
Department of Criminal Justice and Sociology .....	113
Department of History and Philosophy .....	118
Department of Political Science .....	122
Department of Psychology .....	124

School of Public Health.....	130
Department of Communicative Disorders .....	130
Master of Public Health Program .....	136
Doctoral Program in Public Health.....	143
College of Public Service .....	149
School of Planning and Policy .....	149
Department of Public Policy and Administration .....	149
Department of Urban and Regional Planning .....	158
School of Social Work.....	166
Master of Social Work .....	166
Doctoral Program in Social Work .....	173
College of Science, Engineering and Technology .....	179
Department of Biology .....	179
Department of Chemistry, Physics, and Atmospheric Sciences .....	190
Department of Civil and Environmental Engineering, and Industrial Systems and Technology .....	197
Department of Electrical and Computer Engineering and Computer Science.....	201
Department of Mathematics and Statistical Sciences .....	206
Graduate Engineering Programs.....	213
Interdisciplinary Computational Data-Enabled Science and Engineering.....	237
Administration and Graduate Faculty.....	252
Board of Trustees.....	252
University Administration .....	252
The Graduate Council.....	253
Graduate Faculty.....	254
Index.....	
Academic Calendar .....	
<b>Quick Reference to Doctoral Programs</b>	
Business.....	41
Educational Administration .....	65
Early Childhood Education.....	86
Urban Higher Education (Executive Ph.D.).....	90
Clinical Psychology .....	124
Public Health .....	143
Public Administration .....	152
Urban and Regional Planning .....	161
Social Work.....	173
Environmental Science .....	185
Chemistry.....	191
Engineering.....	221
Computational and Data-Enabled Science and Engineering.....	237

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UNIVERSITY DIRECTORY

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**Academic Affairs** Vice President for Academic Affairs and Administration Tower, Seventh Floor, 601-979-2246.

**Academic Assessment** Graduate Advisor in major field.

**Academic Information** Graduate Dean, Administration Tower, First Floor, 601-979-2455.

**Admissions**, Graduate Admissions, Administration Tower, First Floor, 601-979-0342.

**Alumni & Constituency Relations**, 601-979-2281.

**Athletic Tickets** Athletics Office, Lee E. Williams Athletics and Assembly Center, 601-979-2420.

**Automobile Registration** Department of Public Safety, 601-979-2580.

**Books and Supplies** Bookstore, Student Center, First Floor, 601-979-2021.

**Catalog** Graduate Admissions, Administration Tower, First Floor, 601-979-2455.

**Check Cashing** Local Banks; ATM Facilities, Student Center, First Floor.

**Curriculum Center** College of Education Building, Third Floor, Room 314, 601-979-2435.

**Degree Candidacy** Graduate Advisor in major field.

**Degree Audit** Graduate Advisor in major field.

**Development Office** Administration Tower, Third Floor, 601-979-2282.

**Dissertations** Graduate Advisor in major field.

**Drop-and-Add-** Registrar and Records, B. F. Roberts, 601-979-2300.

**Graduate Area Comprehensive Examinations** Graduate Advisor in major field.

**Graduate Assistantships and Scholarships** Academic Departments.

**Graduate English Competency Examination** Graduate Advisor in major field.

**Graduate Support and Fellowships** Coordinator for Graduate Student Services, The Graduate Office, Administration Tower, First Floor, 601-979-2455.

**Graduation Requirements** Graduate Advisor in major field.

**Human Resources** Mississippi e-center, 601-979-2015.

**Identification Cards** Behind the Jacob L. Reddix Campus Union Building, 601-979-2407.

**Illness** Health Center, 601-979-2260.

**Information Technology Office** Mississippi e-Center, 601-979-4299.

**Institutional Advancement** Vice President, Division of Institutional Advancement, Administration Tower, Third Floor, 601-979-2282.

**Institutional Animal Care and Use Committee (IACUC)** Department of Research Compliance, Sixth Floor Administration Tower, 601 979-2589/3664.

**Institutional Research and Planning** Institutional Research and Planning. C.F. Moore 306, 601-979-2935/2484.

**Institutional Review Board (IRB)** Research Compliance, Sixth Floor Administration Tower, 601 979-4197.

**International Students** JSU Global, 601-979-1611.

**Job Placement** Career Services, Ground Floor, Jacob L. Reddix Building, 601-979-2477.

**Library** H. T. Sampson Library, 601-979-2123.

**Lost and Found** Department of Public Safety, 601-979-2580.

**Mississippi Urban Research Center** Jackson Medical Mall, 601-979-2931.

**Name and Address Change** Registrar and Records, B. F. Roberts, 601-979-2300.

**Office of the President** Ninth Floor, Administration Tower, 601-979-2323.

**Research and Federal Relations** Sixth Floor, Administration Tower, 601 979-2931.

**Support Services for Students and Employees** JSU Student Center ,2110(601) 979-3704 or (601) 979-6919 [TTY].

**Parking Violations** Department of Public Safety, 601-979-2580.

**Payment of Fees** Financial Services, B. F. Roberts, 601-979-2215.

**Postal Service** Jacob L. Reddix Campus Union, First Floor, 601-979-2031.

**Research Projects** Graduate Advisor in major field.

**Registration** Degree Seeking Students in academic department; Non-Degree Seeking in the Division of Graduate Studies.

**Schedule Changes** Academic Department.

**Scholarships** Coordinator for Student Support Services, Administration Tower, First Floor. 601-979-2455.

**Specialist Thesis/Project** Graduate Advisor in major field.

**Student Regulations** Assistant Vice President for Student Life, 601- 979-2241.

**Summer School Information** Division of Graduate Studies, Administration Tower, First Floor, 601-979-2455.

**Thesis** Graduate Advisor in major field.

**Transcripts** Registrar and Records, B. F. Roberts, 601-979-2300.

**Tuition Waivers** Graduate Advisor in major field.

**Universities Center** Education and Research Center, Ridgewood Road, 601-432-6138.

**Veterans Affairs** Reddix Building, First Floor, 601-979-0889.

## Jackson State University

- ❖ Mission/Purpose Statement
- ❖ History of the University
- ❖ Accreditation/Memberships

Jackson State University, a coeducational institution, is supported by the State of Mississippi. It is controlled by the Board of Trustees of Institutions of Higher Learning, appointed by the governor. The University is supported by legislative appropriations supplemented by student fees and federal and private grants.

Jackson State University is located in Jackson, Mississippi, the capital and largest city of the state. Jackson is the geographic, political, industrial, and cultural center of the state. The metropolitan area consists of a growing population presently estimated at 568,000. The location of the University in the densely populated section of central Mississippi is such that nearly one-half of the students come from within a fifty-mile radius of the institution; however, the population includes students from every county in the state. A significant number of students also come from outside the state including foreign countries.

The campus is a scenic 175-acre tract situated one mile west of the main business district of the city and is easily accessible from U.S. Highways 80, 49, and 51, and Interstates 20, 220, and 55. A modern airport with direct connections to major cities—north, south, east, and west—is about fifteen minutes away.

### VISION STATEMENT

Building on its historic mission of empowering diverse students to become leaders, Jackson State University will become recognized as a challenging, yet nurturing, state-of-the-art technologically-infused intellectual community. Students and faculty will engage in creative research, participate in interdisciplinary and multi-instructional/organizational collaborative learning teams and serve the global community.

### MISSION STATEMENT (Addendum: June 18, 2020)

The mission of Jackson State University, an HBCU and comprehensive urban research university, is to provide quality teaching, research and service at the baccalaureate, masters, specialist, and doctoral levels to diverse populations of students and communities using various modalities to ensure that they are technologically-advanced, ethical, global leaders who think critically and can address societal problems and compete effectively.

### STATEMENT OF CORE VALUES

#### Tradition

The University believes that its role as a historically black university inspires and exemplifies positive societal change.

#### Accountability

The University believes in the principled exercise of leadership and the sanctity of the public trust.

#### Learning

The University believes in an experimentally enhanced learning environment where teaching, research, and service are integrated and mutually reinforcing.

#### Nurturing

The University is committed to creating a community, which affirms and welcomes persons from diverse backgrounds and experiences and supports the realization of their potential.

### Service

The University responds to the needs of society to the best of its ability and expects its graduates to do likewise.

### Responsibility

The University believes in and accepts its duty to enhance each generation's capacity to improve the human condition.

### PRINCIPLES FOR COLLEGIATE CODE OF CONDUCT

Jackson State University, adopted a Collegiate Code of Conduct, which is designed to enhance students' success inside the classroom as well as in their campus life. It is intended also to assist with building characteristics which will serve as guideposts for lifelong success, understanding and appreciating differences among diverse groups of people, and ultimately leading to a more harmonious learning environment which fosters respect for others and one's self.

The tenets for this covenant are:

1. **Integrity**—Respect and embrace the principles of academic honesty.
2. **Philosophy**—Embrace an academic philosophy for positive progress toward competency in goals, critical and logical thinking, and a commitment to excellence.
3. **Class Attendance**—Participate actively in classroom and other learning environments and commit to becoming a lifelong learner.
4. **Diversity**—Celebrate the similarities and differences in our cultures, races, and ethnic origins.
5. **Communication**—Encourage open communication and expression which is guided by respect for others.
6. **Behavior**—Understand that sexual or social harassment will not be tolerated. Always dress for success.
7. **Profanity**—Discourage the use of profanity and offensive actions out of respect for others.
8. **Accountability**—Accept personal responsibility for one's actions and life choices and realize that embracing negative elements of an unhealthy lifestyle will interfere with success.
9. **Service**—Engage in civic opportunities to share knowledge and skills with local, national, and world communities.
10. **Respect**—Embrace and respect tradition by participating in rituals and observances, especially those that contribute to the history and heritage of the University. Respect others by using cell phones and other electronic devices only in appropriate settings.
11. **Assessment**—Conduct periodic assessments of academic, personal, and career progress. Stay focused on your purpose for being at the University.
12. **Safety**—Be alert to threats to safety and security and inform appropriate authorities of such situations.
13. **Freedom**—Respect the freedom of others to express themselves in matters relating to academic and philosophical opinions.

### EXPECTED EDUCATIONAL RESULTS

The University seeks to ensure that it is responsive to the clientele it serves by producing graduates who are capable of performing responsibly, competently, and effectively in their chosen careers. Jackson State University expects its graduates to become active leaders and participants in the activities of the local community, their home community, and the world through

actions such as volunteerism, consultancies, civic and political appointments, and elections. Through numerous degree programs ranging from the baccalaureate to the doctoral levels, students are nurtured in an environment that supports research, exploration, and discovery in the learning process. The students acquire a general education and are trained to become well-rounded professionals in a variety of disciplines through the University's academic schools and colleges. Further, Jackson State University provides continuing educational opportunities, especially to non-traditional students. Training for all students is facilitated through research laboratories, traditional and innovative classroom instruction, distance learning instruction, technologically advanced libraries, and through internships and alliances with external agencies and organizations. Additionally, institutes, centers, and specialized educational and research services contribute to the experiential growth of students and faculty.

The knowledge, experiences, skills, and qualities acquired by graduates of Jackson State University include the following:

- The ability to communicate effectively through both oral and written expression;
- The ability to demonstrate competence and creativity in a discipline for the purpose of obtaining and maintaining rewarding employment, and/or engaging in entrepreneurial activities;
- The ability to analyze, synthesize, and evaluate ideas and data using logic and quantitative reasoning;
- A familiarity with, and the ability to effectively use current and appropriate technology;
- A social consciousness which will enable one to think critically and responsibly about moral, social, economic, health, cultural, technological, and political issues and to contribute to the improvement of society;
- The achievement of a level of social maturity which will empower one to exercise good human relations skills, informed decision making, motivation, and persistence;
- A knowledge and recognition of the value of one's own ethnic and cultural heritage, and of the similarities and difference inherent in a multi-cultural society; and
- A demonstration of leadership and professionalism through the pursuit of research and educational experiences required in one's chosen career.

## **HISTORY OF THE UNIVERSITY**

Jackson State University's distinguished history began in 1877 as the Natchez Seminary, a private church school set up in Natchez, Miss., under the auspices of the American Baptist Home Mission Society of New York. Beginning with only 20 students, the seminary educated newly freed African Americans as ministers and teachers.

In 1882, the society moved the school to Jackson, Miss., to the land where Millsaps College now stands. The seminary was renamed Jackson College in recognition of its new location in central Mississippi. Three years later, construction began on the site that is now the university's main campus.

After the turn of the 20<sup>th</sup> century, the institution began to broaden its course of study, and in 1924, the college awarded its first degree. By 1934, the American Baptist Home Mission Society had withdrawn its support for the college, which began efforts for the state to take control of the college.

In 1940, the school reorganized its curriculum as a two-year program and changed its name to the Mississippi Negro Training School. The state Institutions of Higher Learning then expanded the curriculum to a four-year teacher education program. The

first graduating class under state support received Bachelor of Science degrees in Education in May 1944, two months after the school was renamed the Jackson College for Negro Teachers.

By 1967, the state had taken control of the school and renamed it Jackson State College. Through a legislative act in 1974, the college became Jackson State University. Five years later, the Institutions of Higher Learning officially designated JSU Mississippi's Urban University.

During the 1990s, the university's academic achievements were bolstered by the establishment of the School of Social Work; the formation of the School of Engineering; the opening of the School of Allied Health Sciences; the accreditation of the School of Business; and the expansion of the Master's in Public Policy and Administration to departmental status, which made it the only such department in Mississippi's higher education system. The university's infrastructure also grew with a \$13.5 million expansion and renovation of the H.T. Sampson Library, which doubled its size, the completion of a \$2 million restoration of historic Ayer Hall and the start of construction on a home for the School of Liberal Arts.

Jackson State made history in 1999 when it landed the Jackson Heart Study, the largest single-site, prospective, epidemiologic investigation of cardiovascular disease among African Americans ever undertaken. The study was initially funded through a \$12.9 million research grant and in 2005 was extended through 2013 with an additional \$54 million.

Jackson State saw much advancement during the first 10 years of the new millennium, including the creation of a five-square-mile urban laboratory surrounding the campus called e-City, which is a technology-based economic, housing and community development initiative. Out of that initiative came the Mississippi Learning Institute, which is a partnership with city and state educational leadership that provides a reading-based, math-oriented system for pre-K through undergraduate education.

Other successes in the new millennium include acquiring a \$20 million facility from Allstate Corporation for only \$3 million, which became home to the Mississippi e-Center @ JSU. The facility is now a technological hub for corporate, community and academic advancement. The university also undertook \$200 million in construction, which resulted in a new College of Liberal Arts, College of Business, Walter Payton Recreation and Wellness Center, Student Center, School of Engineering and the retail and residential development One University Place. The construction also brought new residence halls and apartments and the renovation of the Gibbs-Green Pedestrian Walkway. Also known as "the plaza," the decorative brick walkway provides an expanded pedestrian mall that beckons students and visitors from downtown Jackson to campus.

Jackson State's connection to downtown continued to be enhanced in 2010 with the establishment of the Civil Rights corridor along John R. Lynch Street. The corridor, which is home to the historic COFO Education Center, educates a new generation about the movement for equality.

Today, Jackson State continues its legacy of academic excellence while it secures its future. The university continues to be a top producer of African-American educators and biological and biomedical scientists, and *Washington Monthly* magazine ranks the university annually among the top colleges in the nation for social mobility, research and service. Jackson State

also remains one of the top “Military Friendly Schools” in the country and one of two Historically Black Colleges or

Universities in the country for research and development expenditures.

With an enrollment of over 9,000 students, Jackson State University provides students from more than 50 foreign countries and all of Mississippi’s 82 counties with the academic opportunities to develop the knowledge and skills to succeed. The university is accredited by the Commission of the Southern Association of Colleges and Schools to award 45 bachelor’s degrees, 34 master’s degrees, a specialist in education degree and 13 doctoral degrees.

Today, Jackson State continues its legacy of academic excellence while it secures its future. The rankings published by *Diverse Issues in Higher Education* in 2011 named JSU No. 2 in the country for educating African American teachers. The ranking is consistent with the university’s ongoing standing, where it has been either No. 1 or No. 2 since 2005. Jackson State’s physical sciences master’s programs ranked No. 2, and when considering all disciplines combined, Jackson State ranked No. 7 nationwide.

#### **ORGANIZATION OF THE INSTRUCTIONAL PROGRAMS**

The academic programs of the University are organized into the College of Business; College of Education and Human Development; College of Liberal Arts; College of Public Service; College of Science, Engineering and Technology; Undergraduate Studies; Graduate Studies; and International Studies. Details for each graduate academic program are presented in the appropriate section of this catalog.

#### **SUMMER SESSIONS**

In breadth of offerings, the work of the Summer Sessions is substantially the same as that of the academic year. The summer programs provide opportunities for students who are interested in advancing their general culture, meeting teaching requirements, accelerating their college work, or pursuing the master’s, specialist, or doctoral degree.

To complement its regular work, the University offers a variety of workshops, institutes, and special programs. In general, the teaching staff of the regular year stays in residence for the summer. Visiting professors are brought in when there is a need to supplement the staff or when there is a need for specialized courses.

Each year, a bulletin giving full information on the Summer Sessions is issued. This bulletin is posted on the JSU website.

#### **ACCREDITATIONS**

Jackson State University is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award baccalaureate, master’s, specialist, and doctoral degrees. Contact the Southern Association of Colleges and Schools Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of Jackson State University.

The Southern Association of Colleges and Schools Commission on Colleges is to be contacted only if there is evidence that appears to support an institution’s non-compliance with accreditation requirements or standards.

- The Accredited Board for Engineering and Technology (ABET)
- American Chemical Society (ACS)
- American Psychological Association (APA)
- Association of Technology Management and Applied Engineering (ATMAE)
- Association to Advance Collegiate Schools of Business (AACSB)
- Council on Rehabilitation Education (CORE)
- Council on Social Work Education (CSWE)
- Council on Education for Public Health (CEPH)
- Council for Accreditation of Counseling and Related Educational Programs (CACREP)
- Council on Accreditation in Audiology and Language-Speech Pathology (CAA)
- Council of Accreditation of Educator Preparation (CAEP)
- Engineering Accreditation Commission (EAC)
- National Association of Schools of Art and Design (NASAD)
- National Association of Schools of Music (NASM)
- National Association of Schools of Public Affairs and Administration
- National Council of Teachers of English (NCTE)
- The Planning Board

#### **MEMBERSHIPS**

- American Association of Colleges for Teacher Education
- American Association of Collegiate Registrars and Admissions Officers
- American Business Communication Association
- American Council on Education
- American Society for Engineering Education
- American Association of Collegiate Schools of Business
- American Schools of Construction
- Association of American Colleges
- Association of Departments of English
- Association of Departments of Foreign Language
- Association of State Colleges and Universities
- Cooperative Education Association
- Council of Colleges of Arts and Sciences Institute of International Education
- Council of Historically Black Graduate Schools
- Council of Southern Graduate Schools
- Midwest Association of Graduate Schools
- Mississippi Academy of Sciences
- Mississippi Association of Colleges
- Mississippi Association of Colleges for Teacher Education
- Mississippi Association of Collegiate Registrars and Admissions Officers
- Mississippi Council of Colleges of Arts and Sciences
- Mississippi Counseling Association
- National Association of College Deans, Registrars and Admissions Officers
- National Association of Veterans Programs Administrators
- National Center for Public Service Internship Program
- National Collegiate Honors Council
- National Commission on Accrediting
- National Council for Small Business Management Development
- National Student Exchange
- North American Association of Commencement Officers
- Southern Association of Collegiate Registrars and Admissions Officers
- Southern Business Administration Association

- ❶ The Graduate Council
- ❶ Graduate Admissions
- ❶ Financial Aid and Tuition
- ❶ Academic Regulations
- ❶ Candidacy and Graduation Requirements
- ❶ General Information
- ❶ Residence Requirements

Graduate studies at Jackson State were authorized by the Board of Trustees in 1953. Instruction was limited to Educational Administration and Supervision, for which the first Master of Science in Education degrees were awarded in 1957. Dr. Augustus C. Blanks was the first Director of Graduate Studies. In 1959, Dr. Charles C. Mosley succeeded Dr. Blanks as director and eventually as Dean of the Graduate Program. He was followed by Dr. Oscar A. Rogers, who became Dean of the Graduate Program in 1969. In 1972, the Graduate Program was elevated to school status, the result of a comprehensive expansion effort. In that year, the Master of Business Administration, the Master of Arts, and the Specialist in Education degrees were offered for the first time, and in 1974, the Master of Science degree was offered. In 1982 the first Doctor of Education Degree was conferred in Early Childhood Education. Dr. Leslie Burl McLemore was appointed Dean of the Graduate School in August, 1984. Dr. Bettye Ward Fletcher was appointed Dean of the Graduate School in August, 1991. The Environmental Science Doctoral Program was implemented in the Fall of 1992 as an interdisciplinary program based upon the integration of natural and applied sciences. The Master of Social Work degree was instituted in August, 1995. In 1996, Dr. Lula S. Collier served as the Interim Dean of the Graduate School. The Doctor of Philosophy in Social Work began in August, 1997. Dr. Dorris R. Robinson-Gardner became Dean of the Graduate School in August 1997, and remained in that position until the spring semester of 2018 (then, the Division of Graduate Studies). After serving nine months as Interim Graduate Dean, Dr. Preselfannie E. Whitfield McDaniels became Graduate Dean April 2019. Before this time, Dr. Darcie Bishop briefly served as Interim Dean of the Division of Graduate Studies from April-June 2018. The University is classified as a research university (high research activity) by the Carnegie Foundation.

The Division of Graduate Studies has supervision of all graduate work at the University. The Division of Graduate Studies is composed of the departments which offer graduate instruction leading to masters', educational specialist, and doctoral degrees. The faculty of the Division of Graduate Studies consists of those faculty members in the departments who are qualified to teach and do research on the graduate level. Members of the graduate faculty engage in scholarly pursuits in terms of research, writing, publishing, and participating in professional organizations.

The University is authorized by the Board of Trustees of Institutions of Higher Learning to offer the Doctor of Education Degree in Early Childhood Education, the Doctor of Philosophy Degree in Business Administration, Chemistry, Clinical Psychology, Computational and Data-Enabled Science and Engineering, Educational Administration, Engineering, Environmental Science, Public Administration, Social Work, Urban Higher Education, and Urban and Regional Planning and the D.P.H. in Public Health.

### **The Graduate Council**

The Graduate Council is responsible for the development and coordination of general policies and procedures for graduate programs and the maintenance of uniform standards for the admission of students and for the awarding of graduate degrees. It is, therefore, the responsible body to recommend, initiate, develop, and approve graduate programs.

Acting with the Graduate Dean, the Graduate Council may initiate plans for improvement of graduate instruction, set standards for the Graduate Faculty, and, in general, oversee the proper functioning of the Division of Graduate Studies.

The Graduate Council consists of a representative, usually the Department Chair, from each department and program offering graduate degrees. At the Annual University Fall Faculty Seminar, an additional representative from each School can be elected for one year by the assembled graduate faculty. The Graduate Dean also appoints for one or two year terms additional members from the faculty at large in order to ensure balanced representation. Two graduate students are appointed by the Dean for one year. These representatives act in an advisory capacity and are charged with the transmittance to their departments of the deliberations of the Graduate Council and are also charged to bring recommendations to the Council.

During the academic year, the Graduate Council meets during the following months: October, November, February, and April. Special meetings of the Council may be called by the Dean or by a majority of the Council members.

### **The Graduate Faculty**

The Graduate Faculty consists of the President, Provost, the academic deans and those members of the general faculty who, by their scholarly attainments in their own fields of specialization have demonstrated their competence to offer graduate instruction.

The purpose and functions of the Graduate Faculty, within limits established by the Board of Trustees, are to offer graduate courses, supervise thesis and dissertation research, and advise the Graduate Council and the Graduate Dean on the establishment of policies relating to graduate education. The major advisory functions of the Graduate Faculty are carried on by committees appointed by the Graduate Dean. Appointment to the Graduate Faculty is made by the Provost.



## GRADUATE ADMISSIONS

Admission is granted jointly by Graduate Studies and the program in which the student plans to study. Each program has its own procedures for evaluating applications. Once all required information is received by Graduate Admissions in the Admissions portal, admit decisions can be made at all required levels. Once Graduate Studies receives a recommendation from the graduate faculty of the department and the College Dean or designee, applicants are notified by the Graduate Dean of the decision to admit, conditionally admit, or deny. Admission decisions are valid for 12 months for purposes of initial enrollment.

The Graduate Application can be submitted online by visiting the Jackson State University Graduate Studies website at [www.jsums.edu/graduateschool](http://www.jsums.edu/graduateschool).

It is the applicant's responsibility to ensure that all admission documents are received in the Graduate Studies office on or before the application deadline. All credentials submitted on behalf of an applicant become the property of the University and may be maintained for up to one year. Materials from applicants who do not submit all requested material may be shredded and discarded after one year.

All required information **MUST** be received by the following deadlines. Required information includes:

1. Application
2. Official Transcripts from all accredited colleges and universities attended.
3. Proof of immunization for measles, mumps and rubella is required of all students, and should be submitted to the JSU Health Center at [healthservices@jsums.edu](mailto:healthservices@jsums.edu). See immunization requirements at [www.jsums.edu/healthservices/immunization-requirements/](http://www.jsums.edu/healthservices/immunization-requirements/).
4. Application Fee, for non-Mississippi residents.
5. Departmental/program documentations and test scores.
6. Official TOEFL score and financial support documentation for international applicants.

### General Priority Application Deadlines

Semester	Deadline
Fall	March 1
Summer	March 15
Spring	October 15

### Deadlines for Selected Programs

#### **January 15**

##### Fall Enrollment

Ph. D. in Clinical Psychology

#### **March 1**

##### Fall Enrollment

M.A. in Sociology  
M.A. in Criminal Justice  
M.P.H. in Public Health  
D.P.H. in Public Health  
M.S. in Community Counseling  
M.S.Ed. in School Counseling  
M.S. in Rehabilitation Counseling  
M.S.W. (Full-time) and Ph.D. in Social Work  
M.S. in Communicative Disorders  
Ph.D. in Computational & Data Enabled Science

Ph. D. in Educational Administration  
Ph.D. in Engineering  
Ph. D. in Environmental Science  
Ph. D. in Public Administration  
Ph.D. in Urban Higher Education  
Ph.D. in Urban and Regional Planning

#### **March 15**

##### Fall Enrollment

Ed. D. in Early Childhood Education  
Ph.D. in Business Administration

##### Summer Enrollment

MSW Program - Advanced Standing and Part-time  
M.S. in Educational Administration & Supervision

##### Summer/Fall Enrollment

Ed.S. in Education (all concentrations)

Applications received after the enrollment deadline for the desired enrollment period will be processed for the next enrollment period. Selected academic programs only admit once a year. Please refer to the department's section of the catalog, or the departmental website.

**Note:** Each program, department or school may have admission requirements and standards above the general standards listed below. The student should consult the catalog section for the program, department and academic school for additional requirements.

### **General Admission Requirements for Master's Degrees**

Applicants interested in pursuing a master's degree should submit to Graduate Studies, via the online application portal:

1. The online Graduate Application for Admission;
2. Official copies of transcripts from all 4 year accredited colleges/universities attended;
3. Out-of-state applicants must submit a \$25.00 application fee using a money order; and
4. Proof of immunization for measles, mumps and rubella is required of all students, according to the guidelines of the JSU Health Center.

Other departmental requirements may include the following:

1. Three (3) letters of recommendation.
2. Special application forms and materials required by departments. Please refer to the department's section of the catalog, or the website.
3. Standardized test scores. Please refer to the department's section of the catalog, or the website.

### International Applicants must also submit the following:

1. A satisfactory TOEFL (Test of English as a Foreign Language), PET-A, or IELTS score submitted, or successful completion of ESLI (English as a Second Language).
2. A required \$25.00 application fee submitted by a money order, or electronically using a debit/credit card.
3. A certified, translated copy of all transcripts, mark sheets, and diplomas direct from the university/college(s) to Graduate Studies. A minimum GPA of 3.00 (B average) at the undergraduate level for regular admission. A cumulative GPA of at least 2.50 at the undergraduate level (4.0 scale) is required for conditional admission status.

4. Certified Declaration of Financial Support on file in JSU Global.

Once all required information is received by the Graduate Admissions office a transmittal packet is sent to the appropriate department for its decision. Graduate Studies receives a recommendation from the department and the College Dean or designee; applicants are notified by the Graduate Dean of the decision to admit, conditionally admit, or deny. An admission decision is valid for 12 months. Thereafter, the applicant should contact Graduate Admissions for readmission.

Graduate Studies considers admission to degree programs for only those students who have earned degrees (bachelor's, master's, specialist) from regionally accredited colleges or universities. Students admitted to Graduate Studies are classified as:

1. Regularly admitted status,
2. Qualifying Status,
3. Conditionally admitted status,
4. Non-degree Status.

**Regular status** is awarded to students who have a minimum GPA of 3.00 (on a 4.00 Scale) at the undergraduate level and are admitted to a degree program.

**Qualifying Status** is awarded to students who have a minimum GPA of 3.00 (on a 4.00 Scale) at the undergraduate level but require the completion of prerequisites prior to admission to a degree program. The degree program specifies the prerequisites. Please refer to the department's section of the catalog.

**Conditional Status** may be assigned to students who possess a cumulative GPA of at least 2.50-2.99 at the undergraduate level (on a 4.0 scale) and are admitted to a degree program. Students must earn regular status in the first semester of full time enrollment (i.e. a minimum of 9 CREDIT hours during the semester of enrollment), or in the first 12 CREDIT hours of part-time enrollment by acquiring a GPA of 3.00 in the first 12 hours of graduate work (i.e. 3.00 semester GPA for first and next semester). During the period of "conditional status", students may not earn a letter grade of "C" or lower.

#### **Non-Degree Status at the Master's Level**

Students may be granted special admission to earn certification, update professional skills, earn transfer credit, or to attend a workshop. *Only selected graduate courses are available.* Applicants for non-degree status file only:

1. Application for Admission and Non-degree Enrollment Forms.
2. Official copies of transcript(s) direct from college(s) to the Graduate Admission Office with a cumulative GPA of at least 2.50 at the undergraduate level (on 4.0 scale).

#### **Please note the following:**

- Students in Non-Degree status may not enroll in more than six (6) hours per semester.
- Not more than twelve (12) hours may be taken while in Non-Degree status.
- Approval for Non-Degree status does not guarantee subsequent admission to a degree-conferring program.
- Non-Degree students who may wish to continue at a later date must earn a 3.00 average for any graduate courses completed.
- Non-Degree students who wish to earn a degree at a later date must meet all regular admission criteria and earn a GPA of 3.00 for any course completed in non-degree status.
- Credit earned in Non-Degree status is treated as transfer

credit. A maximum of 12 hours may be transferred to a degree program.

### **General Admission Requirements for Specialist Degrees**

Applicants interested in pursuing a Specialist in Education (Ed.S.) degree should submit to Graduate Studies **by the January 15 deadline:**

Applicants interested in pursuing a specialist degree should submit to Graduate Studies, via the online application portal:

1. The online Graduate Application for Admission;
2. Official copies of transcripts from all 4 year accredited colleges/universities attended;
3. Out-of-state applicants must submit a \$25.00 application fee using a money order; and
4. Proof of immunization for measles, mumps and rubella is required of all students, according to the guidelines of the JSU Health Center.

Other departmental requirements may include the following:

4. Three (3) letters of recommendation.
5. Special application forms and materials required by departments. Please refer to the department's section of the catalog, or the website.
6. Standardized test scores. Please refer to the department's section of the catalog, or the website.

#### **International Applicants must also submit the following:**

1. A satisfactory TOEFL (Test of English as a Foreign Language), PET-A, or IELTS score submitted, or successful completion of ESLI (English as a Second Language).
2. A required \$25.00 application fee submitted by a money order, or electronically using a debit/credit card.
3. A certified, translated copy of all transcripts, mark sheets, and diplomas direct from the university/college(s) to Graduate Studies. A minimum GPA of 3.00 (B average) at the undergraduate level for regular admission. A cumulative GPA of at least 2.50 at the undergraduate level (4.0 scale) is required for conditional admission status.
4. Certified Declaration of Financial Support on file in JSU Global.

#### **Non-Degree Status for the Specialist Level**

Students may be granted special admission to earn certification, update professional skills, earn transfer credit, or to attend a workshop. *Only selected graduate courses are available.* Applicants for non-degree status submit only:

1. Application for Admission and Non-degree Enrollment form to the Graduate Admission Office.
2. Transcript(s) direct from college(s) to the Graduate Admission Office indicating a masters' degree and the department-required minimum GPA.

#### **Please note the following:**

- Students in Non-Degree status may not enroll in more than six (6) hours per semester.
- Not more than twelve (12) hours may be taken while in Non-Degree status.
- Approval for Non-Degree status does not guarantee subsequent admission to a degree-conferring program.
- Non-Degree students who may wish to continue at a later date must earn a 3.00 average for any graduate courses

completed.

- Non-Degree students who wish to earn a degree at a later date must meet all regular admission criteria and earn a GPA of 3.00 for any course completed in non-degree status.
- Credit earned in Non-Degree status is treated as transfer credit. A maximum of 12 hours may be transferred to a degree program.

### **General Admission Requirements for Doctoral Degrees**

Applicants interested in pursuing a doctoral degree (Ph.D., D.P.H., or Ed.D.) should submit to Graduate Studies, via the online application portal:

1. The online Graduate Application for Admission;
2. Official copies of transcripts from all 4 year accredited colleges/universities attended;
3. A Master's degree (or a baccalaureate degree for Chemistry and Clinical Psychology) from an accredited 4 year college or university depending on specific program requirements,
4. A minimum GPA of 3.00 (on a 4.00 Scale) and the - program/department required minimum GPA on the highest degree earned,
5. Out-of-state applicants must submit a \$25.00 application fee using a money order; and
6. Proof of immunization for measles, mumps and rubella is required of all students, according to the guidelines of the JSU Health Center.

Other departmental requirements may include the following:

1. Three (3) letters of recommendation.
2. Special application forms and materials required by departments. Please refer to the department's section of the catalog, or the website.
3. Standardized test scores. Please refer to the department's section of the catalog, or the website.
4. A written statement of purpose.

International Applicants must also submit the following:

1. A satisfactory TOEFL (Test of English as a Foreign Language), PET-A, or IELTS score submitted, or successful completion of ESLI (English as a Second Language).
2. A required \$25.00 application fee submitted by a money order, or electronically using a debit/credit card.
3. A certified, translated copy of all transcripts, mark sheets, and diplomas direct from the university/college(s) to Graduate Studies. A minimum GPA of 3.00 (B average) at the undergraduate level for regular admission. A cumulative GPA of at least 2.50 at the undergraduate level (4.0 scale) is required for conditional admission status.
4. Certified Declaration of Financial Support on file in JSU Global.
- 5.

### **Admission of Faculty and Staff Members**

Jackson State University faculty and staff members may be admitted to Graduate Studies through established procedures and meet all admission criteria.

### **Readmission**

Readmission is NOT automatic. Readmission requires approval by the major department, the Academic College Dean or designee, and Graduate Studies.

**The student must file a Readmission Application at least three weeks before the beginning of the semester.** The student should consult with the major department or academic school before starting this process.

### **Inactive Students**

Students with "inactive" status must apply for readmission. An inactive student is one who in the last twelve-month period has NOT:

1. Registered for at least three credit hours, or
2. Registered for continuous registration, or
3. Registered for thesis/dissertation, or
4. Received a leave of absence.

If the student wants to be readmitted to graduate study, the student has to file for readmission before being permitted to register.

An application for readmission is not required under the following circumstances:

1. If the student has registered during the Spring Semester and returns in the subsequent Fall semester.
2. If the student attended the preceding summer session but does not register during any semester of the intervening academic year.

### **Transfer of Credit at Time of Admission**

Graduate credit may be transferred from graduate schools of regionally accredited institutions. Transfer credit is not automatic and is made upon the recommendation of the chairperson of the major department, the academic college dean or designee and approval of the Dean of Graduate Studies. Credits are usually transferred during or at the end of the student's first semester of enrollment. Students should not assume that all graduate credits earned at other institutions will transfer.

Only those hours in which the student has achieved a grade of "B" will be considered for transfer. These credits must be in an area that is the same as, or closely related to, the major field of concentration. Students should consult with the specific degree program for regulations pertaining to the program. Time limits apply to transfer credit. All master's and specialist students must complete their programs within eight years of starting coursework at Jackson State or elsewhere.

A maximum of 15 semester hours of transfer may be applied toward the doctoral degree. Students should consult with the specific degree program for regulations pertaining to the program. Time limits apply to transfer credit.

A student who has previously registered as non-degree seeking in Graduate Studies should note that work taken in this category is treated as transfer credit if the student is later admitted to a degree program. A maximum of 12 semester hours may be transferred to a graduate degree program from non-degree status, subject to approval by the department chairperson and the Dean of Graduate Studies.

Courses taken while a student is registered in other schools of the University are treated as transfer credit if applied later to graduate degrees. Such courses may not be used to meet residency requirements.

### **INTERNATIONAL STUDENT ADMISSION**

A prospective student who is not a US citizen applying for admission to Jackson State University as a graduate student must apply for admission by March 1, for Fall enrollment; October 1, for Spring enrollment; and March 15, for Summer enrollment. Applicants must submit the following required documents.

1. Application for Admission with \$25.00 admission fee using a money order.
2. Three (3) letters of recommendation from former college professors sent directly to the department or program.
3. **Master's applicants:** A minimum GPA of 3.00 (B average) at the undergraduate level or possess a cumulative GPA of at least 2.50 at the undergraduate level (4.0 scale) for conditional status. **Specialist applicants:** must hold a masters' degree and the department-required minimum GPA. **Doctoral applicants:** a minimum GPA of 3.00 (on a 4.00 Scale) and the program or department required minimum GPA on the highest degree earned.
4. A satisfactory TOEFL (Test of English as a Foreign Language) or IELTS Score must be submitted or successful completion of ESLI.
5. A certified, translated copy of all transcripts, mark sheets, and diplomas direct from the college(s) Graduate Studies.
6. Special application forms and materials required by a department or academic college, if required.
7. Certified Declaration of Financial Support on file in JSU Global.
8. Immunization Record showing proof of immunization compliance for measles and rubella, according to the guidelines of the JSU Health Center.

### **English Language Proficiency Requirements for International Students**

All applicants to Jackson State University must show proof of English Language proficiency. For international students, this is most commonly demonstrated through the Test of English as a Foreign Language (TOEFL) or IELTS (International English Language testing System). The minimum English requirement for international graduate admission is 78 for TOEFL and 6.5 for IELTS. However, JSU accepts additional methods of determining English Proficiency.

Conditional admission to Jackson State University may be granted to international students with a stipulation of successfully completing all levels of English study at the English as a Second Language Institute (ESLI) of the Department of International Studies. This qualifies students to be admitted to all undergraduate and graduate programs provided they fulfill all other academic requirements needed in their respective majors except English Literature which requires TOEFL score of 233 for the Master of Arts degree.

*If Conditional Admission to JSU is received:*

1. The student will receive an I-20 document from JSU to apply for a student visa from their country of origin.
2. The I-20 document will state that the student is admitted to JSU to study an academic degree program and major. It will also state that the student will study English at JSU before beginning study in the academic major and degree program.

### **International Student Advisor**

A student from outside the United States attending Jackson State University on a non-immigrant (F-1 or J-1) student visa is advised through JSU Global. Upon arrival on campus, all international students must report to the International Student Advisor, located at the central office, 1330 John R. Lynch Street. Advisement is offered under the guidelines of the Immigration and Naturalization Service (INS) in the following areas: (1) maintaining student visa status; (2) proper transfer to other school(s); (3) off-campus work authorization; (4) social security card information; (5) health

insurance; (6) travel outside the United States; (7) change of visa status; and (8) reinstatement to student status.

The International Student Advisor will issue an I-20 form to new international students who are accepted to attend a full course of study at Jackson State University. Financial documentation must be forwarded to JSU Global prior to an I-20 form being released for the student visa. International students must inform the International Student Advisor of matters such as enrollment status, change of an address, change of major, legal name change, and/or any disciplinary action taken by the university as a result of the student being convicted of a crime. For more information, contact the International Student Advisor at (601) 979-1611.

### **Changing Departments or Programs**

To transfer from one major department to another during a term in which a student is registered, the student is required to submit a new application.

To transfer from one program to another program located in the same department, the student is required to submit a "Program Transfer form" and submit it to the current major department, requesting transfer. If the department approves, the approval is noted, a current degree evaluation is attached to the form, and forwarded to the Graduate Dean for final action.

## **GRADUATE STUDENT SUPPORT**

Students who wish to apply for graduate student support must be admitted to Graduate Studies as a degree-seeking student and must complete the required application form. Address requests for applications to Graduate Coordinator of Student Services, Jackson State University, Jackson, Mississippi 39217.

Certain departments and academic schools have departmental support for graduate students; interested students should contact the department chair or the dean of the college for further information.

### **Graduate Assistantships**

Graduate Studies awards assistantships each year with a monthly stipend plus tuition for one academic year—Fall and Spring. To qualify for an assistantship the applicant must have at least a 3.00 average on a 4.00 scale, be able to carry at least 9 semester hours of course work each semester and be able to contribute 12 hours for master-level student or 15 hours for a doctoral level student of useful service weekly to a department or academic college. Applications may be obtained from Graduate Studies. Students should apply directly to the department chair or academic dean of the desired major field. The deadline for submitting applications is March 1.

### **Graduate Tuition-waivers**

Graduate Studies, through the departments offering graduate studies, administers a number of tuition waivers. These scholarships provide tuition expense only and may vary in amount from partial to full tuition waiver. Application procedure is the same as outlined under Graduate Assistantships. Tuition-waivers are awarded per academic year. The deadline for submitting applications is March 1.

### **Diversity Scholarships**

Students who wish to apply for a diversity scholarship must be admitted to Graduate Studies as a degree-seeking student and must complete the University's Application for a Diversity Scholarship. Preference is given to Mississippi residents. Applications are available from department chairs and academic deans or designee. Students should apply directly to the department chair and academic

dean or designee of the desired major field. A limited number of scholarships are awarded per academic year. The deadline for submitting applications is March 1.

### **Staff Remission of Fees**

Full-time staff of Jackson State University who qualifies for admission may, with the approval of the immediate supervisor, have tuition and general fees remitted for two courses (including accompanying laboratory) per semester or per summer session. Supervisors are authorized to allow employees to take course work during their lunch hour, whenever possible (provided the course does not exceed the one hour allotted for lunch, which should be taken between the hours of 11:00 a.m. – 2:00 p.m.).

### **FEDERAL FINANCIAL AID**

The Financial Aid department at Jackson State University coordinates all financial assistance offered to students. The fundamental purpose of the financial aid program is to make it possible for students to attend school who would normally be deprived of a post-secondary education. Financial Aid is economic assistance available to help a student meet the difference between what he/she can afford to pay and what it will actually cost to attend Jackson State University. This economic assistance may be in the form of grants, loans, employment, scholarships or a combination of any of these programs.

Students seeking federal financial assistance are required to complete the Free Application for Federal Student Aid (FAFSA). The priority deadline date for Jackson State University is April 15 of each year.

### **FREE APPLICATION FOR FEDERAL STUDENT AID (FAFSA) – [www.fafsa.ed.gov](http://www.fafsa.ed.gov)**

All aid is contingent upon admission; therefore, a student must apply for admission to the University. Federal Financial Aid Programs fall into one of three categories: grants, loans and work-study. Grants are financial aid that students do not have to pay back unless; the student withdraws from school and owes a refund.

### **LOAN**

**Loans** are borrowed money that must be repaid with interest. The types of loans available are:

1. Federal Perkins Loans
2. Federal Stafford Loans
3. Federal Plus Loans

**FEDERAL PERKINS LOAN** The **Federal Perkins Loan** is a low-interest (5%) loan obtained through the University to help finance a student's college education. These loans are for both undergraduate and graduate students with exceptional financial need. A student may borrow up to \$5,500 for each year of undergraduate study and \$8,000 each year for graduate or professional study. A student must sign a promissory note agreeing to repay the loan before the school will either pay him/her directly or credit the student's account. The student will receive the loan within at least two payments during the academic year. A student has a period of time before repayment of the loan begins, called a "grace period." Half-time students have a grace period of nine months after he/she graduates, leaves school, or drops below half time. At the end of the grace period, the student must begin repaying the loan. He/she may be allowed up to 10 years to repay it.

**Federal Direct Stafford Loans** (Subsidized and Unsubsidized) are low interest loans made by the U. S. Department of Education to students enrolled at least half time. For loans first disbursed on or after July 1, 2009, the interest rate is 6.8 percent for subsidized loans

for undergraduates, and 6.8 percent for unsubsidized loans for undergraduates and graduates. The Federal Stafford "Subsidized" Loan is based on financial need, but the Federal Stafford "Unsubsidized" Loan is not. The Subsidized and Unsubsidized Federal Stafford Loans combined cannot exceed loan maximums set by the Department of Education per academic year.

Eligible loan amounts are determined by the Cost of Attendance minus Expected Family Contribution, minus any other assistance the student may receive. After the student graduates, leaves school, or drops below halftime, he/she has six months before beginning repayment. This is called a "grace period" if it is a Subsidized Stafford Loan; he/she will not have to pay any principal or interest during that period. If the student has an Unsubsidized Stafford Loan, he/she will be responsible for the interest from the time the loan is disbursed until the loan is paid in full. Student Loan Entrance and Exit Interviews are required for all loan borrowers. Students may contact the Financial Aid Office for more information.

The **Federal Direct PLUS Loan** is a loan for the parent of a dependent child who is enrolled at least half time. In addition, graduate or professional degree students may obtain PLUS Loans to help pay for their own education. This loan is made through the U. S. Department of Education. Credit checks are required. The yearly loan limit is the cost of attendance minus any estimated financial aid for which the student is eligible. The Direct PLUS loan interest rate is 7.90%. Repayment begins on the date of the last disbursement for the period in which the loan was disbursed.

The **Federal Work Study Programs** provides part-time jobs for students who have financial need, allowing them to earn money to help pay educational expenses. The program encourages community service work. At Jackson State University, students work in various offices and departments with their work schedule built around their academic class schedule. The amount of the FWS award depends on the student's financial need and the amount of money the school has been allocated for the program. In arranging a job and assigning a work schedule, the work study coordinator will take into account the student's class schedule, health and the skills needed to perform the assigned duties. The salary received will be based on the current minimum wage. The student will be allowed to work up to 15 hours per week unless otherwise indicated. Under no circumstances can a student earn as much FWS money as he/she wants. The total amount of aid awarded from Federal and Non-Federal sources cannot exceed the student's financial need. The student is paid twice per month.

The **University Work Aid** is a non-need program that provides jobs for students who are unable to qualify for the Federal Work Study Program. These funds are available for students who possess a needed skill or talent. Students are employed in a variety of University offices and departments. In order to qualify, the student must:

- Demonstrate financial need, except for certain loan programs;
- Have a high school diploma or a General Education Development (GED) certificate;
- Enroll as a regular student seeking a degree or certificate in an eligible program;
- Be a U.S. citizen or eligible non-citizen;
- Have a Social Security Number;
- Make satisfactory academic progress;
- Have certification that federal aid will be used only for educational expenses;
- Certify there is no default on a federal loan and does not owe money on a federal grant;

- Be registered with Selective Service, if required.

### **VERIFICATION POLICIES AND PROCEDURES**

The Office of Financial Aid conducts verification on all applicants selected for verification by the Department of Education edit checks. Applicants selected for verification must submit the following documents to the Financial Aid Office:

1. Signed copy of the Federal Income Tax Returns (or other acceptable tax documents) of the applicant and or spouse, or parent(s), if applicable;
2. A completed Verification Worksheet (dependent or independent) listing household size, number in college, and other untaxed income and benefits. The information submitted on the FAFSA is compared with the information contained in the official documents submitted to complete verification (tax returns or other acceptable documents and verification worksheets). The verification process can take four to six weeks from the time all required documents are received.

NOTE: Verification documents requested by the Financial Aid Office must be submitted within sixty (60) days of the request. If the requested information is not received within the sixty (60) days, the application for financial assistance will not be processed until verification is completed.

### **CORRECTION PROCESS**

Once all documents are received, corrections, if any are needed, will be made electronically. If the verification process results in a change in the expected family contribution (EFC), the student will receive an acknowledgment letter from the U.S. Department of Education with the corrected data. The student will also receive notification from the Financial Aid Office via his/her JSU web account. The electronic correction process takes 7 to 10, working days. Once the correction is received, the student will be awarded and notified.

### **CONFLICTING INFORMATION**

Conflicting information must be resolved prior to disbursing federal student aid to students. If conflicting information is discovered after disbursing federal student aid, the discrepancies must still be resolved and the appropriate action must be taken based on specific program requirements. Conflicting information is separate and distinct from verification and must be resolved whether or not the student is selected for verification.

### **REFERRALS TO THE OFFICE OF THE INSPECTOR GENERAL OF THE DEPARTMENT OF EDUCATION**

The Office of Financial Aid will refer to the Inspector General of the Department of Education any credible information indicating that an applicant for Title IV Program assistance may have engaged in fraud or other criminal misconduct in connection with his or her application. Examples of this information are:

1. False claims of independent student status;
2. False claims of citizenship;
3. Use of false identities;
4. Forgery of signatures or certification;
5. False statements of income; and
6. Other illegal conduct involving the administration of Title IV Programs.

### **RECOVERY OF FUNDS (OVERPAYMENTS)**

Jackson State University will make every effort to avoid overpayment of Federal funds to financial aid recipients. If a financial aid recipient receives an overpayment as a result of the verification process, the Office of Financial Aid will eliminate the overpayment. The overpayment will be eliminated by adjusting

subsequent financial aid payments during the award year or reimbursing the Federal Program account within sixty (60) days of the recipient's last day of attendance or the last day of the award year, whichever is earlier. **APPLICANTS WHO OWE A REPAYMENT OF FEDERAL FUNDS ARE NOT ELIGIBLE TO RECEIVE FEDERAL AID UNTIL THE OVERPAYMENT IS PAID IN FULL.**

### **STANDARDS FOR SATISFACTORY ACADEMIC PROGRESS**

Section 484 of the Higher Education Act (HEA), as amended, requires that a student maintains satisfactory progress in the course of study he or she is pursuing according to the standards and practices of the institution in which he or she is enrolled in order to receive aid under the student financial assistance programs authorized by Title IV of the HEA. These programs include the Federal Pell Grant, Federal Supplemental Education Opportunity Grant (SEOG), Academic Competitiveness Grant (ACG), National Science and Mathematics Access to Retain Talent Grant (SMART), Leveraging Education Assistance Partnership Program (LEAP), Federal Work-Study, Federal Perkins Loan, and the Federal Family Educational Loan Program.

#### **Standards for Academic Progress**

Graduate students must meet the Satisfactory Academic Progress Standard as set by Graduate Studies (adequate progress toward completion of degree requirements and cumulative GPA of 3.0 and above). Graduate students must complete a minimum percentage of hours attempted (grades of "F", "W" and "I" are counted as attempted; however, not as completed). Students have a two semester probationary period including the current semester enrolled. Failure to bring the cumulative GPA into compliance and or complete the required hours renders the student ineligible for financial aid and the student is denied Title IV assistance.

#### **MAXIMUM TIME FRAME**

Financial aid eligibility is subject to the maximum time frame limits noted below:

#### **Quantitative Standards**

Students are expected to complete the requirements for degree within a reasonable time frame. Students must pass a minimum percentage of JSU courses attempted. For this standard students must pass 67% of hours attempted.

#### **Grades**

Grades of "D", "F", "W" (withdrawn), and "I" (incomplete) do not count towards satisfactory academic progress; however, they are counted as attempted hours. Also, all repeated hours are counted as attempted hours.

***Satisfactory academic progress is measured bi-annually at the end of the fall and spring semesters.***

#### **Probation**

Failure to complete the required hours and maintain the appropriate cumulative GPA will result in a two semester probationary period including the current semester enrolled. Failure to bring the cumulative GPA into compliance and or complete the required hours, at this point, will be considered as not maintaining satisfactory academic progress and therefore renders the student ineligible for Title IV assistance.

#### **Appeal Procedures**

Students who fail to maintain satisfactory progress or have not met degree requirements may appeal the denial by explaining the

mitigating circumstances in writing to the Chairperson of the Financial Aid Appeals Committee by the last published date to complete registration. Appeals received after this date will be considered for the next semester.

#### **Reinstatement**

The Financial Aid Appeals Committee will review the appeal for reinstatement of aid. The decision will be based on the strength of the appeal, the documentation submitted, and the academic record. Financial aid will be reinstated for students who reestablish eligibility by maintaining the standards of satisfactory academic progress.

#### **Mitigating Circumstances**

Mitigating circumstances are special or unusual circumstances or conditions that have affected the student's ability to progress according to specified standards. These circumstances may include, but not limited to, bereavement, illness, emotional or personal difficulties, disability, eviction and undue hardship based on traumatic occurrences. These circumstances must be explained in detail when appealing a financial aid denial. The Financial Aid Office at Jackson State University does not discriminate against students on the basis of sex, handicap, race, color, religion or national origin, pursuant to the requirements of Title IX of the Educational Amendments of 1972, the Rehabilitation Act of 1973, and other applicable statutes.

#### **TUITION and FEES**

*Fees are subject to change upon approval of the Board of Trustees of State Institutions of Higher Learning.*

**Full-Time Students** - State resident students who register for 9.0-13.0 semester hours will pay a flat rate per semester. State resident students that register for more than 13.0 semester hours will pay the flat rate plus a prorated amount for each hour over 13.0 hours. In addition to the regular fees assessed graduate students, out-of-state students will pay an out-of-state fee.

**Part-Time Students** - A graduate student carrying fewer than 9 hours is considered part time. Part-time students are assessed tuition on a prorated amount per semester hour. Out-of-state students must pay, an additional prorated amount per semester hour.

**Auditing Students** - A person may audit a course at the University without being officially enrolled as a degree-seeking student. The student must, however, be eligible for admission to the University. A fee is charged per semester hour for each course, and no refund is made if the course is dropped at any time after registration.

#### **Examinations Charges**

Entering students are assessed a testing fee for the Graduate English Competency Examination.

#### **Thesis and Dissertation Fees**

Master's and Specialist students completing a thesis are assessed a thesis fee. Doctoral students are assessed a dissertation fee.

#### **Tuition Policy Adjustment**

Tuition adjustments are based on the date that classes begin and the date a course is dropped or on the date of withdrawal. Students withdrawing from the University before the close of a semester must complete and submit the "Application for Withdrawal" form, before the announced deadline (see Academic Calendar). This form can be secured from the Office of Student Affairs, JSU Student Center.

#### **Withdrawals and Refunds**

The Higher Education Amendments of 1998 (HEA98) represent a major shift in the Return of Title IV Federal Financial Aid when a student withdraws from the University. The policy governs all federal grant and loan programs but does not include the Federal Work Study program. In general, it is assumed that a student "earns" approved/verified federal financial aid awards in proportion to the number of days in the term prior to the student's complete withdrawal. If a student completely withdraws from the University during a term, the University must calculate, according to a specific formula, the portion of the total financial assistance that the student has earned and is entitled to retain, until the time that the student withdrew.

### **ACADEMIC REGULATIONS**

#### **HONOR CODE**

I will be honest in all of my academic coursework and will not indulge in or tolerate the academic dishonesty of my counterparts or peers. I will not partake in any type of misconduct, misrepresentation, or immoral behavior that will harm, damage, or endanger any person, property or myself or reflect negatively against me or hinder my academic continuance. I will strive to achieve excellence and to complete degree requirements without hesitation. I am a valuable part of the Jackson State University family, and proud of it.

#### **Student Responsibility for Meeting Graduate Requirements**

Each student should thoroughly study the **Graduate Catalog** and become completely familiar with the organization, policies, and regulations of the university. Failure to do this may result in serious mistakes for which the student shall be held fully responsible. Only the general academic regulations and requirements governing graduate programs are presented in Orientation. Specific requirements pertaining to individual programs are outlined within the departmental section of the catalog. It is the student's responsibility to keep current on information that may affect their matriculation in graduate school. Whenever a problem occurs, students should contact their major advisor, department chair, college dean, and/or the Graduate Dean's office. Advisors endeavor to provide such assistance in a timely and accurate manner, **but meeting requirements for graduation is the responsibility of the student.**

A graduate student may be classified as:

1. In Good Standing,
2. On Probation, or
3. Subject to Dismissal.

**1. Good Standing.** A graduate student is judged to be in good standing when making adequate progress toward completion of degree requirements, has a cumulative GPA of 3.00 and is not on probation or subject to dismissal.

**2. Probation.** Failure to complete the required hours and maintain the above grade point average will result in a one semester probationary period. Probation is intended to provide a student whose performance is less than fully satisfactory a period of time to bring his/her performance up to a level consistent with the minimum standards enforced by Graduate Studies and/or the program in which enrolled.

A student may not remain in probationary status for longer than two semesters. When a student is placed on probation, he/she will be notified of the fact in writing and will have one semester to correct the deficiencies that led to this action. If, at the end of this period, all deficiencies have been removed, and no other circumstances

warranting probation have developed in the interim, the student will be returned to good standing. If the deficiencies have not been corrected by the end of this period, the student may become subject to dismissal.

Probation may be initiated by the Graduate Dean or by the recommendation of the Graduate Advisor in the student's major department, school, college or graduate group. A student may be placed on probation for one or more of the following reasons:

- Failure to maintain an adequate level of performance (as measured by GPA) in courses central to the student's program of study.
- Failure on the departmental preliminary examinations or failure to stand for such exams in a timely manner.
- Failure to proceed to the comprehensive or qualifying exams within a reasonable period of time.
- Failure to make adequate progress in meeting other stated program requirements for example: submission of an acceptable dissertation prospectus, passage of required language examinations, etc.)
- Failure to make adequate progress in thesis or dissertation research or writing, or in the independent study project.

Students on probationary status may not be admitted to examinations (Master's Comprehensive or Doctoral Qualifying), nor advanced to Candidacy, nor hold an academic appointment, nor receive a graduate fellowship, nor defend a dissertation, thesis or project, nor be eligible to receive a graduate degree.

### 3. Unsatisfactory Work and Dismissal from a Department or Program.

A graduate student whose course work is unsatisfactory may be requested to leave the program. The recommendation for dismissal must be made in writing by the adviser, stating specific examples of unsatisfactory work, and must follow a conference held between the student and the adviser. Academic school procedures for dismissal including notification of the Graduate Dean must be followed.

#### Reinstatement

A former student must submit an Application for Readmission. Official transcripts from all institutions attended since a student was last enrolled at Jackson State University must be mailed to the Office of Graduate Admissions. Unofficial transcripts will not be accepted. Dismissed students who are approved for readmission will be readmitted on probation and must follow the requirements outlined and included with the student's letter from the Division of Graduate Studies which must be received before the student is permitted to register.

#### STUDENTS ACADEMIC GRIEVANCE PROCEDURE

The objective of the Grievance Procedure is to create and sustain an academic environment that permits students to freely express concerns or reveal complaints about their education and the educational process and to have their concerns and complaints addressed swiftly and forthrightly. Students enrolled at Jackson State University may register a concern or complaint about any academic regulation, the instructional program, delivery of the program, grades received, the academic advisement system, or any other matter related to academic affairs, without any adverse action for expressing the concern or filing the complaint. Concerns and complaints will be received, explored or investigated, and responded to in a fair and timely fashion, though students should understand that the final response by the University may not always be the response that they prefer.

#### Procedures

*Classroom Concerns or Complaints* (e.g., grades received; improper dismissals; unprofessional behavior):

- Student discusses concern or complaint with the instructor.
- Instructor provides a response (allowing up to five days if investigation is required)
- Complaints unresolved by the instructor or for which the response is unacceptable must be described in writing by the student and submitted to the department chair.
- The chair properly logs and investigates the matter and provides a written response to the student within ten days.
- Issues that are still unresolved must be submitted by the student to the college dean.
- The dean provides the final written response within ten days, which may be done with committee input and/or in consultation with higher-level administrators.

*Other Academic Concerns or Complaints* (e.g., academic advisement or academic regulations):

- Student discusses the concern or complaint with the academic advisor.
- The advisor provides a response (allow up to five days if an investigation is needed), or refers it to the appropriate official/body, e.g., department chair or Academic Standards Committee, for response within 20 days. The appropriate official/body returns the response to the advisor and the advisor returns it to the student.
- Unresolved concerns or complaints must be submitted in writing by the student to the college dean.
- The college dean provides a written response within ten days, which may be done with committee input and/or in consultation with the Vice President and Associate Vice President for Academic Affairs.
- If the complaint remains, the student will submit it to the Associate Vice President for Academic Affairs for a final response.

NOTE: Academic complaints dating back more than a semester generally will not be investigated.

#### The Grading System

The student's proficiency in the work of graduate courses is rated in terms of letter grades. One semester of graduate credit represents one hour per week of class contact time for sixteen weeks. Grade point average (GPA) is determined on a 4.0 scale. The following are letters used to designate a student's standing in a course.

A- Excellent	4 quality points per credit
B-Good	3 quality points per credit
C-Fair	2 quality points per credit
D-Poor	1 quality point per credit
F-Failure	0 quality point per credit
IP-In progress	0 quality points
I-Incomplete	0 quality points

No more than two "C" grades are allowed. A GPA of 3.00 must be maintained both overall and in the student's major area of concentration at the Master's level. Doctoral students should consult the department chair and academic college dean for specific requirements. Grades of "D", "F", "W" (withdrawn), and "I" (incomplete) do not count towards satisfactory academic progress; however, they are counted as attempted hours.

**Use of the IP Grade** - The "IP" grade is to be assigned for project, thesis, dissertation courses or independent study. The grade(s) for these courses should be assigned upon the successful defense of the project, thesis or dissertation or completion of the independent study.



### **Credit Hour(s)**

Jackson State University (JSU) follows the guidelines set forth by its governing body, the Board of Trustees of the State Institutions of Higher Learning (IHL). IHL Policy 506 states the following:

- Course requirements shall include at a minimum the following :
- Board required minimum of 2,250 minutes per three semester hour course, which may include final exam time.
  - The number of weeks must meet Federal financial aid requirements.

For the purpose of implementing this policy and in accordance with federal regulations, Department of Education's Code of Federal Regulations, JSU defines a credit hour as an amount of work represented in intended learning outcomes and verified by evidence of student achievement that is an institutionally established equivalency that reasonably approximates not less than 1) For "one credit hour of classroom or direct faculty instruction and a minimum of two hours of out of class student work each week for approximately fifteen weeks for one semester or trimester hour of credit, or ten to twelve weeks for one quarter hour of credit, or the equivalent amount of work over a different amount of time," or 2) At least an equivalent amount of work as required as previously stated in item one for other academic activities as established by the institution including laboratory work, internships, practicums, studio work, and other academic work leading to the award of credit hours. (Credit hour definition as published in the Department of Education's Code of Federal Regulations "CFR," Title 34, Part 600.2)

### **Repeating Courses**

Students in graduate degree programs are permitted to repeat two (2) courses upon the recommendation of the departmental graduate advisor. Only two repeats are allowed in a graduate program. Both grades will show on the transcript, and the highest grade will be used in computing the grade point average (GPA).

### **Incompletes**

When circumstances beyond a student's control prevent the completion of a course satisfactorily, the student has two options. One is to withdraw, if the 'drop' deadline has passed. The other is to request a grade of incomplete, "I", which allows a time extension. Such a request must be made before the semester ends and before the final exam, and the granting of this privilege is entirely at the professor's discretion.

If the student is in residence, the deficiency must be made up and the grade changed by the instructor within the first six weeks of the following semester. If the student is not in residence, the deficiency must be made up within one calendar year for the date the "I" was given.

The professor is required to indicate on the grade sheet the grade the student should receive if the incomplete is not removed within the prescribed time period. If the student fails to complete the course within the specific time, the grade so indicated will be recorded as the grade of record. When enrolled for thesis, research, or independent study, the "I/P" grade may be applied. No more than two "I's" are allowed at any time unless otherwise granted by the Graduate Dean.

### **Graduate Academic Second Chance Policy Statement**

Graduate students, previously enrolled at the university, may be eligible for matriculation under the Graduate Academic Second Chance Policy.

The Academic Second Chance option must be requested during the

re-admission process and students are required to meet all degree requirements for re-admission. This option may be approved as a one-time opportunity for re-entering graduate school. No student is entitled to readmission under this policy and the University reserves the right to exercise its discretion to deny readmission for academic or non-academic reasons, including financial, conduct-related, probability of success, or other legally permissible reason.

### *Requirements*

1. Student must have been separated from the University for at least three years.
2. All academic credit hours and grades earned during previous enrollment at Jackson State will remain on the student's academic history transcript.
  - a. Previously earned academic credit hours with grades of "B" and above, within time limits, may be used to meet degree requirements if approved by the department chair.
  - b. Previously earned academic credit hours with grades of less than "B" will not be used in the computation of the student's grade point average.
  - c. Graduate English Competency Examination requirements must be completed, if applicable
3. Student must meet all new departmental requirements for the existing program.

### *Student Responsibilities*

1. Complete the Graduate Academic Second Chance application obtained from Graduate Studies. Obtain an official notification of potential readmission from the academic department.
2. Develop and submit an academic enhancement plan in consultation with an academic advisor. Obtain approval of the academic enhancement plan from the department chair in major area and the college dean.
3. Submit a completed application and an approved academic enhancement plan, with appropriate signatures from advisor, chairperson and college dean Graduate Studies.

### **Course Loads**

The minimum course load for a full-time graduate student is nine (9) semester hours and the maximum is thirteen (13) semester hours. The Master of Social Work degree is an exception, requiring fifteen (15) semester hours.

### **Concurrent External Credit**

Students enrolled at Jackson State University who wish to receive credit for courses taken at another institution must obtain written permission from the major department and the Graduate Dean PRIOR to enrolling in external courses. Students are advised to check if these courses will apply towards degree requirements. Approved external transfer credit will be processed upon completion of the course.

### **Concurrent or Second Master's Degrees**

Students are not prohibited from earning two degrees; however, giving credit for one course in two degree programs is permitted only in programs under the College of Education and Human Development. It is considered preferable for an ambitious student to progress from one degree to a higher degree. In this case the earlier degree serves as a prerequisite or is automatically credited as part of the later degree.

Graduate courses which have been taken by undergraduate seniors and which have been applied toward the baccalaureate degree may not be used for filling requirements of a graduate degree.

### **Time Limits**

All master's and specialist students must complete their programs within eight years of starting coursework at Jackson State or elsewhere. Doctoral students must complete all degree requirements within ten years from the time of admission into a program. Specific programs may have different time limits.

### **Residency**

For Master's and Specialist students the residency is one semester; for doctoral students it is one year.

### **Academic Honesty**

All students at Jackson State University are expected to conduct their academic studies in an honest and responsible manner. Any student found guilty of dishonesty in academic work shall be subject to disciplinary actions as defined in the Student Handbook.

#### *Cheating includes the following:*

- Submitting material that is not yours as part of your course performance, such as copying from another student's exam, allowing a student to copy from your exam;
- Using information or devices that are not allowed by the faculty; such as using formulas or data from a home computer program, or using unauthorized materials for a take-home exam;
- Obtaining and using unauthorized material, such as a copy of an examination before it is given;
- Fabricating information, such as the data for a lab report;
- Violating procedures prescribed to protect the integrity of an assignment, test, or other evaluation;
- Collaborating with others on assignments without the faculty's consent;
- Cooperating with or helping another student to cheat;
- Participating in or performing other forms of dishonest behavior, such as having another person take an examination in your place; or altering exam answers and requesting the exam be re-graded, or communicating with any person during an exam, other than the proctor or faculty.

#### *Plagiarism includes the following:*

- Directly quoting the words of others without using quotation marks or indented format to identify them;
- Using sources of information (published or unpublished) without identifying them;
- Paraphrasing material or ideas of others without identifying the sources;
- Dissertations, theses, projects, proposals or other research papers that are not the work of the student submitting them;
- When direct quotations are used, they must be indicated and when the ideas of another are incorporated in papers they must be appropriately acknowledged;
- When a student is unsure about something that he/she wants to do or the proper use of materials, a faculty member should be consulted for clarification.

### **Unauthorized/ Illegal Web Use**

Jackson State University allows and encourages the use of University owned computer resources. This use is a granted privilege, not a right. Student use must be in accordance with all applicable laws, policies, and standards regarding acceptable use. Areas of concern include but are not limited to:

- Discriminating or libelous statements.
- Copyright infringements ("illegal downloading").
- Obscene, offensive or threatening materials.

- Usage primarily for financial gain or compensation not related to JSU's mission.

Failure to comply with this policy may result in charges being brought within the University's judicial system and in the civil or criminal court system.

### **Withdrawal from the University**

Formal withdrawal from the University is processed through the Office of the Vice President for Student Life. No withdrawal from the University is official until the student has processed the appropriate forms. The effective date of withdrawal is the date the formal application is filed in the Office of the Vice President for Student Life. A student who leaves the University without filing a statement of formal withdrawal is given the grade that the record warrants in all courses in which he/she is enrolled. A student may withdraw from a course within the first 25 days following registration. Grades will be recorded in accordance with the schedule listed in this section. Registration dates are printed in the Official Course Schedule Booklet, also available online.

Neglecting attendance in classes or merely giving notice to instructors will not be considered as official notice of withdrawal. An unofficial withdrawal may result in failure in the course. Class changes that place a student below full-time status will unfavorably affect veteran subsistence, financial aid, and eligibility for other academic recognition.

### **Continuous Enrollment**

Minimum registration for a graduate student to meet the continuous enrollment requirement is **one (1)** graduate credit a term. It is the student's responsibility to register for the appropriate number of credits **each semester** to meet departmental requirements.

### **Leaves of Absence**

Under special circumstances such as illness, family hardship or military service a student who is a degree candidate may be given a leave of absence. In order to be considered for a leave of absence the student must **NOT**:

- Have registered for any course.
- Have been previously registered for thesis or dissertation credits.
- Have an "I" on his/her record.
- Be scheduled to take any examination (such as language, comprehensive, etc.)

Leaves of absence will be granted for one semester, or longer, as circumstances warrant. No leave is granted for more than one calendar year. To obtain a leave of absence:

1. The student writes a letter outlining in detail the reasons for requesting a leave. This letter should be addressed to the Chairperson of the student's major department.
2. The Chairperson will determine the appropriateness of giving the leave, adding his/her recommendation to the letter and forward it to the Graduate Dean.
3. After action by the Dean, the Division of Graduate Studies will notify the student, the department, and the Registrar (the latter only if the leave is granted) of the decision.

### **Advising of Students**

Each graduate student pursuing a degree is assigned an advisor or mentor within the area in which the student is concentrating. The department chair in consultation with the student will appoint this adviser. If the student in a degree program chooses to write a thesis or a project, a committee of at least three (3) graduate faculty

members will be appointed to help direct the thesis. Students writing a dissertation, will be guided by a committee, chaired by the major advisor.

### **Enrollment of Undergraduate Seniors in Graduate Courses**

A graduating senior who has an overall 3.00 or better grade point average and who lacks no more than nine semester credit hours for the completion of the baccalaureate degree may, with the approval of the Graduate Dean, register for a maximum of six (6) semester credit hours on the graduate level during the final undergraduate semester. No student may receive graduate credit for any course taken when he has not formally applied for, and received, admission to the Division of Graduate Studies.

### **Courses Carrying Undergraduate and Graduate Credits**

A maximum of twelve (12) hours of courses carrying undergraduate and graduate credits may be accepted as graduate credit under the following conditions:

1. Such courses may be listed in the Bulletin as offering both undergraduate and graduate credit
2. A minimum grade of "B" must be received in each course presented for graduate credit,
3. These courses must not also be used to fulfill undergraduate requirements;
4. The student must be enrolled in a graduate program when such courses are taken; and
5. Additional course requirements must be included for graduate students.
6. Graduate courses which have been taken by undergraduate seniors and which have been applied toward the baccalaureate degree may not be used for filling requirements of a graduate degree.

### **IACUC Approval of Research**

The Institutional Animal Care and Use Committee (IACUC), as mandated by federal law, oversee the institution's compliance with all aspects of the institution's animal care and use program. The IACUC is responsible for reviewing all animal care applications using vertebrate animals, inspecting animal facilities and investigator laboratories, investigating animal concerns, and overseeing educational and training programs. The IACUC assures that animal research conducted at the Jackson State University remains in full compliance with institutional policies, federal, state and local regulations. Contact the IACUC Office if you have any questions regarding protocol application submission and approval at (601) 979-2589/3664. IACUC approval is valid for 12 months.

### **IRB Approval of Research**

The role of the Institutional Review Board (IRB) is to review all the proposed research involving human subjects and to ensure that subjects are treated ethically and that their rights and welfare are adequately protected. The IRB process is administered through the Research Compliance Unit. Investigators and student researchers are not allowed to solicit human subject participation or begin data collection prior to receiving IRB approval in writing. Contact the IRB Office if you have any questions regarding protocol for application submission and approval at (601) 979-4197. IRB approval is valid for 12 months.

### **Institutional Biosafety Committee (IBC)**

The Jackson State University Institutional Biosafety Committee (IBC) has the charge of reviewing and approving recombinant DNA research and biohazard projects. All recombinant DNA research at JSU, regardless of funding source, must be conducted in accordance with the NIH Guidelines for Research Involving Recombinant DNA Molecules and the use of infectious micro-organisms in research,

teaching and the handling of infectious waste disposal. The Biosafety website serves as a helpful reference and guide to facilitate compliance with Biosafety related practices, institutional policies, and governmental regulations. All questions pertaining to Biosafety should be directed to Research Compliance at (601) 979-2859.

## **CANDIDACY AND GRADUATION REQUIREMENTS**

*\*Students should consult with department chairs or academic dean for specific departmental, school and college requirements.*

### **Master's Degree**

#### **ADMISSION TO CANDIDACY**

When approximately 12-15 semester hours have been completed the student should make application for advancement to candidacy. Please note that students cannot be advanced to candidacy until:

1. All admission requirements have been met.
2. Notification of the program option the student is electing, or that is required.
3. All incompletes ("I" grades) have been removed.
4. The Graduate English Competency Examination was passed, or in the event of failure, passed ENG 500 with a grade of B or better.
5. Earned a 3.00 cumulative G. P. A.
6. Registered for Graduate Degree Candidacy with the approval of the Candidacy Committee in his major department.
7. A minimum of 30 required hours of course work (please check with your individual program).

#### **EXAMINATIONS**

Each graduate student who intends to earn a master's degree at Jackson State University must successfully pass qualifying, comprehensive or final examinations or a combination of these. The content and methods of conducting these examinations are the responsibility of the college, school or department.

#### **GRADUATE ENGLISH COMPETENCY EXAMINATION, (GECE)**

This test is taken prior to registration or during the first term when the student begins work beyond the undergraduate level at Jackson State University. It is designed to show the strengths and weaknesses of each student in the areas of grammar and usage, logic, organization and content. Students unsuccessful on the English Examination must pass English 500-Advanced Laboratory Writing. The examination can be taken only once. It is expected that students who must take English 500 will do so no later than their second semester of enrollment. A final grade of "B" or higher is considered passing in English 500. ENG 500 does not earn credit in graduate degree programs. Information on specific dates can be obtained from Graduate Studies, the Graduate website and academic departments.

#### **Exemptions**

1. Students in selected degree programs may meet this requirement by obtaining appropriate scores on the following examinations: GRE, GMAT and PRAXIS.
2. JSU undergraduate students may meet this requirement by entering Graduate Studies **immediately** after graduation.

Please contact your department chair or graduate program advisor for eligibility. Graduate Studies must receive notification of students meeting the requirement via exemptions.

#### **GRADUATE RECORD EXAMINATION (GRE)**

Candidates for degrees at Jackson State University may be required to take the Aptitude Test and may be required to take the Advanced Test in their field of specialization. Information with regard to dates and fees may be secured from the JSU Testing Center

(www.jsu.edu/dta) or from the Educational Testing Service, 20 Nassau Street, Princeton, New Jersey 08540 (www.ets.org). Students should consult with the department chair for specific departmental requirements.

### **GRADUATE AREA COMPREHENSIVE EXAMINATION, (GACE)**

Each graduate student who intends to become a candidate for the master's degree at Jackson State University should take a written comprehensive examination in the student area of specialization after completing 24 semester hours of graduate credit with a cumulative average of "B" or better in courses completed.

No student may appear for the comprehensive examination until the Dean of Graduate Studies has declared him eligible for the examination. The student must be registered for at least one credit hour in the semester in which the examination will be taken. An audited course will not meet this requirement.

The Graduate Area Comprehensive Examination may be given three times a year, once in each semester. The Dean of Graduate Studies will set the date. A student may be permitted to take the Comprehensive Examination twice if the student fails the second time, the student must petition the Academic College Dean or designee for permission to take the examination the third time. The student should register with the assigned adviser or department chair to take this examination in the last semester or summer session of course work.

If the student fails the written examination, the program has the option of administering an oral examination as an immediate second chance attempt to pass the examination. The oral examination must be administered in the same semester the written comprehensive examination is given. Results should be reported to the Division of Graduate Studies within 2 weeks of the examination.

### **FINAL ORAL EXAMINATION.**

The Final Oral Examination is administered by a committee of at least three graduate faculty to students who write theses. This examination is based chiefly on the candidate's thesis and its relationship to the general field of education. No student is admitted to the oral examination unless he/ she has satisfied all previous requirements. This examination can be taken only after the thesis is in final form ready for final approval, and no earlier than the final term or semester of the candidate's program. Students who fail their oral examination may petition the Academic College Dean or designee for a second examination after an interval of six months has elapsed.

### **SPECIAL DEPARTMENTAL EXAMINATIONS**

Students should consult with department chair or academic college dean or designee.

### **GRADUATION REQUIREMENTS**

Minimum requirements for all master's degree students are listed below:

1. Notification of the program option the student is electing, or that is required (thesis, project or extra hours).
2. Completion of the required semester hours of coursework with a "B" average (3.00 GPA).
3. Completion of all departmental requirements.
4. Completion of the Graduation clearance process.

### **Program Options**

Degree programs vary in requiring a thesis, project, or additional coursework. It is the responsibility of the student to be

knowledgeable of all departmental requirements. Students are strongly encouraged to consult with their departmental graduate adviser.

**Thesis** — (6 hours) The candidate electing to write a thesis will select a problem area of interest within his major field. The thesis will be directed by the student's major adviser, with the approval of the student's thesis committee. There is a two (2) year limit on completing the thesis, calculated from the date the student passed the Graduate Comprehensive Examination. From the time the Graduate Comprehensive Examination is taken a student is required to be in continuous enrollment until the degree is earned within the two-year limitation.

**Project**— (3 hours) The term "Project" is broadly conceived: it may be an experiment, a review of research, an analysis and evaluation of some psychological, educational or vocational problem related to the student's work or some other type of independent study. The specific nature, procedure and requirements of the project are to be arranged by the candidate and his adviser with the approval of appropriate departmental faculty members or chairs. A minimum of 33 semester hours is required for this option. The results of the Project are to be reported in written form according to an acceptable stylistic format.

**Additional Coursework**—The student, in consultation with his/her adviser will select at least two additional courses to extend, expand or supplement his area of specialization.

### **Specialist in Education**

The Specialist in Education Degree is offered in some of the teaching fields in which Master's degrees are offered

### **ADMISSION TO CANDIDACY**

When approximately 12-15 semester hours have been completed the student should make application for advancement to candidacy. Please note that students cannot be advanced to candidacy until:

1. Supervisory committee is formed and proposal is approved.
2. G. P. A. earned is a 3.00 cumulative
3. All incompletes ("I" grades) have been removed.
4. All departmental requirements are completed.
5. Registered for Graduate Degree Candidacy with Graduate Studies.

### **Program Options**

It is the responsibility of the student to be knowledgeable of all departmental requirements.

### **Thesis**

All candidates submitting a thesis must defend it in a formal, public forum. The specific nature, procedure and requirements of the thesis are to be arranged by the candidate and his adviser with the approval of appropriate departmental faculty members or chairs. Policies and standards for establishing a committee and for preparation and submission are outlined in documents from the Graduate Studies office and individual departments. Continuous enrollment is required and all procedures must be followed.

### **EXAMINATIONS**

Each graduate student who intends to earn a specialist degree at Jackson State University must successfully pass qualifying, comprehensive or final examinations or a combination of these. The content and methods of conducting these examinations are the responsibility of the college, school or department.

### **GRADUATE RECORD EXAMINATION, (GRE) and MILLER ANALOGIES TEST (MAT).**

Candidates for degrees at Jackson State University may be required to take the Aptitude Test and may be required to take the Advanced Test in their field of specialization. Information with regard to dates and fees may be secured from the JSU Testing Center ([www.jsums.edu/dta](http://www.jsums.edu/dta)) or by writing to Educational Testing Service, 20 Nassau Street, Princeton, New Jersey 08540 ([www.ets.org](http://www.ets.org)). Students should consult with department chair for specific departmental requirements.

### **GRADUATE AREA COMPREHENSIVE EXAMINATION, (GACE).**

Each graduate student who intends to become a candidate for the specialist degree at Jackson State University should take a written comprehensive examination in the student's area of specialization after completing all graduate program requirements with a cumulative average of "B" (3.00 GPA) or better in courses completed.

No student may appear for the comprehensive examination until after he/she has been declared eligible for the examination by the Dean of Graduate Studies. The student must be registered for at least one credit hour in the semester in which the examination will be taken. An audited course will not meet this requirement.

The Graduate Comprehensive Examination may be given three times a year, once in each semester. The date will be set by the Dean of Graduate Studies. A student may be permitted to take the Comprehensive Examination twice: if the student fails the second time, the student must petition the Academic College Dean or designee for permission to take the examination a third time. The student should register with the assigned adviser or department chair to take this examination in the last semester or summer session of course work.

If the student fails the written examination, the program has the option of administering an oral examination as an immediate second chance attempt to pass the examination. The oral examination must be administered in the same semester the written comprehensive examination is given. Results should be reported to the Division of Graduate Studies within 2 weeks of the examination.

### **FINAL ORAL EXAMINATION.**

The Final Oral Examination is administered by a committee of at least three graduate faculty to students who write theses or projects. This examination is based chiefly on the candidate's research and its relationship to the general field of education. No student is admitted to the oral examination unless he/she has satisfied all previous requirements. This examination can be taken only after the thesis is in final form ready for final approval, and no earlier than the final term or semester of the candidate's program. Students who fail their oral examination may petition the Academic College Dean or designee for a second examination after an interval of six months has elapsed.

### **GRADUATION REQUIREMENTS**

These are the basic requirements for the specialist degree:

1. Completion of the required course work with the required departmental cumulative GPA.
2. Comprehensive Examination, if required.
3. Defense of thesis or project.
4. Completion of graduation clearance process.

### **Doctoral Degree**

#### **ADMISSION TO CANDIDACY**

When eligibility has been established according to program requirements, the student should make application for advancement to candidacy. A student is eligible for candidacy when he has:

1. Achieved regular status
2. Earned a cumulative 3.00 GPA and the required departmental cumulative GPA.
3. All incompletes ("I" grades) have been removed.
4. Completion of all departmental requirements.
5. Filed or registered for Graduate Degree Candidacy with the approval of the Candidacy Committee in the major department.

#### **Dissertations**

All candidates must submit a dissertation based on independent and original research and must defend it in a formal, public forum. Policies and standards for establishing a dissertation committee, preparing and submitting the dissertation are outlined in "Guidelines for Preparing the Doctoral Dissertation" (available at [www.jsums.edu/graduateschool](http://www.jsums.edu/graduateschool)) and are supplemented by documents from Graduate Studies and individual departments. All procedures must be followed.

#### **Doctoral Examinations**

Every student must pass a group of comprehensive examinations (oral, written, or both) that covers the primary areas of the student's program. After passing these examinations, the student may advance to candidacy.

#### **EXAMINATIONS**

Each graduate student who intends to earn a doctoral degree at Jackson State University must successfully pass qualifying, comprehensive or final examinations and/or a combination of these. The content and methods of conducting these examinations are the responsibility of the college, school, or department.

### **GRADUATE RECORD EXAMINATION, (GRE) and MILLER ANALOGIES TEST (MAT).**

Candidates for degrees at Jackson State University may be required to take the Aptitude Test and may be required to take the Advanced Test in their field of specialization. Information with regard to dates and fees may be secured from the JSU Testing Center ([www.jsums.edu/dta](http://www.jsums.edu/dta)) or from the Educational Testing Service, 20 Nassau Street, Princeton, New Jersey 08540 ([www.ets.org](http://www.ets.org)). Students should consult with the department chair for specific departmental requirements.

### **GRADUATE AREA COMPREHENSIVE EXAMINATION, (GACE).**

Each graduate student who intends to become a candidate for the doctoral degree at Jackson State University should take a written comprehensive examination in the student area of specialization after completing 80% of the graduate program with a cumulative average of "B" or better in courses completed.

No student may appear for the comprehensive examination until after he/she has been declared eligible for the examination by the Dean of Graduate Studies. The student must be registered for at least one credit hour in the semester in which the examination will be taken. An audited course will not meet this requirement.

The Graduate Comprehensive Examination may be given three times a year, once in each semester. The date will be set by the Graduate Dean. A student may be permitted to take the Comprehensive Examination twice: if the student fails the second time, the student must petition the Academic School Dean or designee for permission

to take the examination the third time. The student should register with the assigned adviser or department chair to take this examination in the last semester or summer session of course work.

If the student fails the written examination, the program has the option of administering an oral examination as an immediate second chance attempt to pass the examination. The oral examination must be administered in the same semester the written comprehensive examination is given. Results should be reported to the Division of Graduate Studies within 2 weeks of the examination.

#### **FINAL ORAL EXAMINATION.**

The Final Oral Examination is administered by a committee of graduate faculty to students who write dissertations. This examination is based chiefly on the candidate's dissertation and its relationship to the general field of education. No student is admitted to the oral examination unless he/ she has satisfied all previous requirements. This examination can be taken only after the thesis is in final form ready for final approval, and no earlier than the final term or semester of the candidate's program. Students who fail their oral examination may petition the Academic College Dean or designee for a second examination after an interval of six months has elapsed.

#### **GRADUATION REQUIREMENTS**

These are the basic requirements for the doctoral degree:

1. A minimum of 42 required semester hours of course work (please check with your individual program).
2. Internship if required.
3. Comprehensive Examination
4. Defense of Dissertation
5. Completion of the graduation clearance process.

#### **Chronological Summary of Steps Leading to the Doctoral Degree**

1. Admission and Continuous Enrollment
2. Completion of coursework with the required GPA
3. Meet residency requirement
4. Internship (if required by program)
5. Comprehensive Examinations
6. Appointment of dissertation committee
7. Register, complete and defend dissertation
8. Apply for graduation
9. Dissertation publication, arranged through the Division of Library and Information Resources.
10. Granting of degree. Diploma issued by the Registrar.

#### **Required Forms for Matriculation**

The University/Graduate Studies uses several forms to assist in the advising process for graduate degree candidates. These forms may be obtained from departmental advisers or at [www.jsums.edu/graduateschool/graduate-forms/](http://www.jsums.edu/graduateschool/graduate-forms/). The forms, when properly executed, provide general directions for matriculation at the University. Each form must be completed under the direction of the student's adviser.

**Degree Plan (Degree Audit).** It contains principal program requirements, thereby serving as a checklist for the candidate. Submission to Graduate Studies is not required.

**Application for Graduate Degree Candidacy.** (Required) Register for degree candidacy after earning 12 semester hours (Masters and Specialist Degree) and the GECE requirement (Master) or 80% of required coursework (Doctoral) and only when all admission and departmental requirements have been met. The student also forms the committee for the dissertation, thesis or project at this time.

**Committee Report of Defense Results.** The "Committee Report of Defense Results" is completed upon the successful defense of the dissertation, thesis, or project before the student's committee. This form must be submitted prior to final "Clearance for Graduation".

**Online Graduation Clearance.** This process is to be completed by the published deadline and prior to Commencement. See <http://www.jsums.edu>, or access "Online Graduation Clearance" in the PAWS system.

#### **Specific Degree Requirements**

The specific requirements (admission, candidacy and graduate) for each degree are listed in the appropriate section of the catalog for the program, department, or school. The student should consult the major department or academic school for additional requirements.

### **GENERAL STATEMENTS**

#### **GENERAL PHILOSOPHY ON ACADEMIC RECORDS**

Jackson State University maintains a permanent academic record for each student enrolled. The Permanent Academic Record contains those grades received from course work completed at Jackson State University along with any transfer of courses and credits from any other accredited institution of higher learning that is used by JSU to fulfill the degree requirements. All records are confidential. Academic records are considered property of the University. Opportunities are provided for students to inspect and to control the release of information contained in their records in accordance with the Family Education Rights and Privacy Act (FERPA) of 1974. The purpose of FERPA is to afford certain rights to students concerning their education records. The primary rights afforded are the right to inspect and review the education records, the right to seek to have the records amended, and the right to have some control over the disclosure of information from those records. The Act applies to all education records maintained by JSU that are directly related to a student. Records containing a student's name, social security number or other personally identifiable information are covered by FERPA.

*The Retention and Disposal of Student Records:* The Office of the Registrar and Records currently maintains academic records for students previously and currently enrolled. Academic records are stored on the mainframe computer located in the Office of Information Management with systems backup conducted nightly. Academic records that are not retrievable through computer access are stored on microfilm as well as a CD-ROM document imaging system located in the Registrar's Office. An additional copy of the microfilm, and CD-ROM disks are maintained at an off-site location, with duplicate copies of microfiche being stored in a steel vault located in the Office of Information Management. Once the information contained in the academic record has been electronically reproduced, the hardcopy document may be destroyed. However, the contents of those records can be reproduced at such time that the student requests personal examination or disclosure of the academic record be forwarded to another institution of higher learning, a potential or present employer, or any person or persons so designated by the student. The student must make a written request to have the academic record released. The academic record is generated and printed on transcript security paper that prevents duplicating or printing an official copy outside the Office of the Registrar and Records.

To file a complaint with the U.S. Department of Education concerning alleged failures by the University to comply with the requirements of FERPA should be done with

Family Policy Compliance Office  
U.S. Department of Education  
400 Maryland Ave., SW  
Washington, DC 20202-4605.

### **TRANSCRIPTS**

Transcript requests are made electronically or in writing and directed to the Office of the Registrar and Records. Transcripts may also be requested online at [www.jsums.edu](http://www.jsums.edu). The transcript is a student's complete and permanent academic record. It shows all undergraduate and/or graduate work completed, results, and degrees awarded at JSU. In addition, a summary of transfer credit is listed and detailed course work may be included. After the last enrollment period, transcript totals are shown. The Office of the Registrar and Records will not release transcripts received from other schools and colleges.

The current cost for each transcript is \$7.50. Checks or money orders should be made payable to Jackson State University. Transcripts can only be released for students having no outstanding financial obligations to the University. Transcripts are also held if the student has incomplete admissions files. Fees are not refunded under any circumstance.

### **Name and Address Change**

A student who has had a change in name after his/her last registration must provide the University with the appropriate documentation that substantiates the legal name change. This must be submitted to the Office of the Registrar and Records prior to the student's next registration. Registration under a name different from that used in the student's last enrollment cannot be accomplished without appropriate documentation, which becomes a part of the student's permanent file. All grade reports and transcripts are issued under the student's legal name as recorded in the Office of the Registrar and Records.

A student who has had a change of address after his/her last registration must provide the University the new address by completing the appropriate form. This form may be secured from the Office of the Registrar and Records. All transcripts will be mailed to the location of the new address.

### **Student Participation in Institutional Governance**

As constituents of the university community, students are free, individually and collectively, to express their own position on institutional policies and on matters of general interest and on matters of general interest to the student body. The Graduate Student Association (GSA) is the primary forum for graduate student representation and provides a channel for communication among graduate students at Jackson State University. The organization serves as a vehicle for students to participate in the formulation of university policies directly affecting them. Students also may participate in the decision-making process through active membership on *ad hoc* and standing committees as specified in the University's policies on committee structure.

Contact the Graduate Studies office for membership information or additional information on the Graduate Student Association, by phone, (601) 979-4322, or by e-mail, [gadmappl@jsums.edu](mailto:gadmappl@jsums.edu).

### **Veterans and Military Center**

The Veteran Affairs Office (VA) assists students who are veterans and dependents of veterans who are eligible for benefits through the Veterans Administration. The office is located on the first floor of the Jacob Reddix Building and was established to act as a liaison between the eligible students and the various Jackson State

University offices to help resolve entitlement problems. It can be reached at (601) 979-0889/1365. Office hours are: 8:00 a.m. to 5:00 p.m.-Monday – Friday: [www.jsums.edu/studentlife/veteran-student-services-program/](http://www.jsums.edu/studentlife/veteran-student-services-program/).

The mailing address is:  
Coordinator of Veterans Affairs  
P.O. Box 17125  
Jackson State University  
Jackson, MS 39217

### **Disability Services Center & ADA Compliance**

The Disability Services Center & ADA Compliance is committed to coordinating reasonable services and accommodations to JSU students and staff as well as other external constituents with disabilities. Special emphasis is given to accessibility and inclusion when meeting the needs of all of our students, employees and visitors. Any student, employee, or campus visitor who has been diagnosed with a disability is eligible for accommodations at JSU. The student, employee, or visitor must make the University aware of his/her disability by presenting documentation applicably showing the disability and need for academic adjustment, auxiliary aids, accommodations, and services. For additional information, please contact the Department of Disability Services & ADA Compliance at (601) 979-3704. The Office is located on the second floor, Office 2110, of the Student Center.

### **Identification Cards (I.D.)**

It is the policy of Jackson State University that all students, faculty, and staff must obtain and carry an official JSU identification card (I.D.). The identification card provides students, faculty, and staff access to dining facilities, athletic events, residence halls, and the library. Cardholders who participate in the declining balance program for students and inclining payroll deductible program for faculty and staff may make purchases in Student Dining, the Convenience Store, the Deli, Subway, Cash Dining, Bookstore, Health Center, Laundry rooms, Publications, and Vending machines. The identification card is the property of Jackson State University; it is intended for current JSU students, faculty, staff and guests only and must be returned upon request. This card is non-transferable. No fee will be charged for the original issuance of an I.D. Card. However, replacement of a lost, stolen or damaged card is the cardholder's responsibility. The cardholder is also responsible for safeguarding his/her I.D. card. The I.D. Center is located in the Laundry Facilities Building directly behind Jacob L. Reddix Hall. Office hours are from 8:00 a.m. to 5:00 p.m.- Monday-Friday.

### **DRUG-FREE SCHOOLS/CAMPUSES**

Jackson State University acknowledges and adheres to the laws of the state of Mississippi. The University also complies with the Drug-Free Schools and Communities Act Amendments of 1989. In compliance with federal and state laws, at Jackson State University the following will apply:

#### **Drugs**

- A. The possession of any drug controlled by federal or state laws on or off campus is prohibited.
- B. In compliance with state and federal law, it is illegal to possess, consume, use, or distribute (or intend to distribute or use) any drug controlled by federal or state laws on the campus of Jackson State University or at event sponsored or supervised by the University.
- C. The manufacture, intent to manufacture, or intent to furnish drugs controlled by federal or state law is prohibited.
- D. The sale, intent to sell, purchase, and intent to purchase, deliver, and intent to deliver drugs controlled by federal or

state law is prohibited.

- E. Possession or use of any drug related paraphernalia is also prohibited. The University reserves the right to initiate judicial action if drug violations occur on or off-campus. Students found to be in violation of the drug policy will be subject to disciplinary action, which may result in suspension or expulsion.

#### **FAILURE TO COMPLY**

- A. Failure to respond or properly identify oneself pursuant to a request by properly identified officials of the University while in the performance of their duties.
- B. Failure to report to the office of a University official for a conference, meeting, or appointment by the official.
- C. Failure to appear as a witness in a disciplinary case when properly notified.
- D. Failure to comply with any disciplinary condition imposed on a person by any judicial body or administrator.

Participation in such acts is subject to University disciplinary action.

#### **HARASSMENT**

- A. No person shall engage in any act of intimidation or harassment, physical force or violence that is directed against any person or group of persons because of their ethnicity, race, national origin, religion, gender, sexual orientation or preference, disability or political beliefs.
- B. No person shall use the telephone or electronic mail to harass another.

Participation in such acts is subject to University disciplinary action and punishable by law.

#### **SEXUAL HARASSMENT**

No person shall engage in unwelcome sexual advances, requests for sexual favors and/or other physical conduct, and expressive behavior of a sexual nature where submission to such conduct is made explicitly, or implicitly, a term or condition of an individual's employment or education; or where submission to, or rejection of such conduct by an individual is used as a basis for academic or employment decisions affecting that individual.

Instances where such conduct has the purpose of substantially interfering with an individual's academic or professional performance or creating an intimidating, hostile, or demeaning employment or educational environment is strictly prohibited.

#### **RESIDENCE REQUIREMENTS**

Jackson State University applies the definitions and conditions as required by the State of Mississippi in the classification of students as residents or non-residents for the assessment of fees. Initial residency classification of an applicant for admission is determined at the time of admission. The University holds the student responsible for knowing and registering under their correct residential status. A student who willfully registers their status incorrectly will be subject to disciplinary action or dismissal and required to pay the fees they would have otherwise been required to pay. The following classifications will apply:

**A MINOR-** The residence of a person less than 21 years of age is that of the father. After the death of the father, the residence of the minor is that of the mother. If the parents are divorced, the residence of the minor is that of the parent who was granted custody by the court; or, if custody was not granted, the residence continues to be that of the father. If both parents are dead, the residence of the minor is that of the last surviving parent at the time of that parent's death,

unless the minor lives with a legal guardian of their person duly appointed by a proper court of Mississippi, in which case his/her residence becomes that of the guardian.

**AN ADULT-** The residence of an adult is that place where they are domiciled, that is, the place where they physically reside with the intention of remaining indefinitely or of returning permanently when temporarily absent.

**REMOVAL OF PARENTS FROM MISSISSIPPI-** If the parents of a minor who is enrolled as a student in an institution of higher learning move their legal residence from the State of Mississippi, the minor is immediately classified as a nonresident student.

**TWELVE MONTHS OF RESIDENCE REQUIRED-** No student may be admitted to the University as a resident of Mississippi unless their residence, as defined here in above, has been the State of Mississippi for a continuous period of at least 12 months immediately preceding their admission.

**RESIDENCY PETITIONS-** Nonresidents may petition the institution for a change of residency classification. A person who enters the State of Mississippi from another state and enters a system institution is considered a nonresident. Provided, however, that any person who has attained 21 years of age and has thereafter established residency and resided within the State of Mississippi for 12 consecutive months after attaining 21 years of age upon sworn affidavit and other representation, may petition the particular institution for a change of residency classification for the purposes of fees and tuition assessment. The institution may make reasonable inquiry into the validity of the petitioner's claim. Such petition of change of residency must be made on or before the last day a student may register at a particular institution without penalty.

**RESIDENCE STATUS OF A MARRIED STUDENT-** A married student may claim the residence of the spouse, or may claim independent resident status under the same regulation, set forth above, as any other adult.

**CHILDREN OF PARENTS WHO ARE EMPLOYED BY THE UNIVERSITY-** Children of parents who are members of the faculty or staff may be classified as residents without regard to the residence requirement of 12 months.

**MILITARY PERSONNEL ASSIGNED ON ACTIVE DUTY STATIONED IN MISSISSIPPI-** Members of the U. S. armed forces on extended active duty and stationed within the State of Mississippi may be classified as residents, without regard to the residence requirement of 12 months, for the purpose of attendance at the University. Residence status of such military personnel who are not legal residents of Mississippi (as defined in Section 37-103-12 of House Bill 409, passed during the 1988 Session of the Mississippi Legislature) shall terminate upon their reassignment for duty in the continental United States outside Mississippi.

**CHILDREN OF MILITARY PERSONNEL -** Residence status of children of members of the armed forces on extended active duty shall be that of the military parent for the purpose of attending the University during the time that their military parent are stationed within the State of Mississippi and shall be continued through the time that military parents are stationed in an overseas area with last duty assignment within the State of Mississippi. Residence status of minor children shall terminate upon reassignment under permanent change of station orders of their military parents for duty in the continental United States outside of the State of Mississippi excepting temporary training assignments en route from Mississippi.



**CERTIFICATION OF RESIDENCE OF MILITARY PERSONNEL** - A military person on active duty stationed in Mississippi who wishes to avail her/himself or their dependents of the provisions of the paragraph titled "MILITARY PERSONNEL ASSIGNED ON ACTIVE DUTY STATIONED IN MISSISSIPPI" must submit a certificate from the military organization showing the name of the military member, the name of the dependent, if for a dependent, the name of the organization of assignment and its address (may be in the letterhead), that the military member will be on active duty stationed in Mississippi on the date of registration in the University; that the military member is not on transfer orders; and the signature of the commanding officer, the adjutant, or the personnel officer of the unit of assignment with the signers' rank and title. A military certificate must be presented to the Registrar each semester within 10 days prior to registration for the provisions of the paragraph "MILITARY PERSONNEL ASSIGNED ON ACTIVE DUTY STATIONED IN MISSISSIPPI," to be effective.

School Counseling  
 Social Work  
 Sociology  
 Special Education  
 Sport Science  
 Teaching  
 Technology Education  
 Urban Higher Education  
 Urban and Regional Planning

M.S.  
 M.S.W., Ph.D.  
 M.A.  
 M.S.Ed.  
 M.S.  
 M.A.T.  
 M.S.Ed.  
 Ph.D.  
 M.A., Ph.D.

**FAMILIES OF STUDENT-** The spouse and children of a nonresident student who pays or receives a waiver of the NONRESIDENT fee may enroll at the University upon payment of the appropriate fees charged to a resident. Nonresident fees for spouses and children of part-time resident students will be prorated.

**ALIENS-** All aliens are classified as non-residents except those aliens lawfully admitted for permanent residence in the United States, and who reside in the State of Mississippi. An alien who petitions to be declared a resident of the State of Mississippi must prove that they have been accorded permanent residence by the United States Immigration and Naturalization Service. The alien petitioner must also prove their intent to remain in the State of Mississippi.

**GRADUATE PROGRAMS IN WHICH DEGREES ARE OFFERED**

<b>Program</b>	<b>Degree(s)</b>
Accounting	M.P.A.
Biology	M.S.
Business Administration	M.B.A., Ph.D.
Chemistry	M.S., Ph.D.
Clinical Mental Health	M.S.
Clinical Psychology	Ph.D.
Communicative Disorders	M.S.
Computational and Data-Enabled Science & Eng.	M.S., Ph.D.
Computer Science	M.S.
Criminology & Justice Services	M.A.
Early Childhood Education	Ed.D.
Early Childhood Education: K-3	M.S.Ed.
Education	Ed.S.
Educational Administration	Ph.D.
Educational Administration, and Supervision	M.S.,
Elementary Education	M.S.Ed.
Engineering	M.S., Ph.D.
English	M.A.
Environmental Science	Ph.D.
Guidance & Counseling	M.S.Ed, M.S.
Hazardous Materials Management	M.S.
Health, Physical Education, and Recreation	M.S.Ed.
History	M.A.
Mass Communications	M.S.
Mathematics	M.S., M.S.T.
Music Education	M.M.Ed.
Political Science	M.A.
Public Administration	Ph.D.
Public Health	M.P.H., D.P.H.
Public Policy and Administration	M.P.P.A.
Reading Education	M.S.Ed.
Rehabilitation Counseling	M.S.
Science Education	M.S.T.

## RESEARCH ORGANIZATIONS, ACADEMIC AND COMMUNITY SERVICES

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### University Libraries

University Libraries enhance the research and teaching endeavors of the university community through the acquisition and dissemination of information. University Libraries are comprised of the Henry T. Sampson Library and four branch libraries. Occupying a central location on the JSU campus, the Henry T. Sampson Library is a facility of over 150,000 square feet and houses in excess of one million resource items. Included among the collections in the Sampson Library are the following:

- African-American Collection - a major collection of resources by or about African-Americans and Africa.
- Special Collections - a non-circulating collection of documents with major concentrations of resources detailing the history of Jackson State and African Americans.
- Periodicals - the library currently subscribes to more than 1,500 electronic journals with an additional number in print format.
- Government Documents - the library is presently a selective depository for federal documents.
- Media Resources - a number of audiovisual resources are available to enhance classroom instruction.

**Library Services** - The Department is a client-oriented agency, and offers some of the following services:

- Information Literacy (IL) Instruction - a major initiative that provides instruction in locating, evaluating, and using resources. IL is provided through formal classroom lectures, as well as through individualized instruction. Electronic and printed guides, handbooks, pathfinders and bibliographies made available to patrons, also contribute to the IL initiative.
- Reference Assistance - librarians are available at all times to help patrons locate, select and interpret the appropriate information and resources.
- Interlibrary Loan - resources not held by the library are made available through this service. Some nominal fees may be incurred.

**Facilities** - The library is furnished to meet the comfort and needs of library users and is fully accessible for those with disabilities, with most of the library collections housed in open access areas. Additionally, the library also provides these specialized facilities:

- Computer Lab - a workstation computer facility is located on the first floor.
- Auditorium - with seating for approximately 150, the auditorium is located on the second floor and is used for campus-based activities.

- Group Study Sections - sections are provided for groups engaged in study.

**Library Technology** - Electronic library resources are available from campus as well as from remote locations and may be accessed from the library website at <http://sampson.jsums.edu>. In addition to the online public access catalog (OPAC), other electronic resources include, indices, abstracts, full text articles and journals, and online books.

**Branch Libraries** - The branch libraries listed below support the academic program(s) indicated:

- Public Health Library - located in the Jackson Medical Mall, this library supports the College of Public Service, as well as some of the special programs located in the Medical Mall.
- Cleopatra D. Thompson Curriculum Research and Development Center Library - housed in the College of Education and Human Development, main campus, this library provides general support in the education curriculum and the Early Childhood programs.
- Jake Ayers Research Library - housed at the e-Center, the Ayers Library supports the Executive Ph.D. program.

The general public is invited to use any of the Jackson State libraries. Borrowing privileges, however, are reserved for university students, staff, and faculty. Regulations concerning the use of the facility are on the library website as well as in library handbooks and guides.

### JSU Global

JSU Global, formally known as International Programs, is located on the 3rd floor of the Charles F. Moore Building. Established in September 1993, JSU Global engages in a variety of activities. With the overall aim of internationalizing Jackson State University, specific goals include internationalizing the curriculum; expanding the foreign language program; enhancing student involvement in international exchanges, work abroad programs and internships; increasing faculty participation in international exchanges, research, and internships; establishing language houses; increasing international student enrollment; establishment of an international village; increasing global awareness of the larger community; enhancing programs for international students; establishment of an international business center; instituting an intensive English language training program; and increasing faculty involvement in technical assistance and training projects. The Office is also responsible for facilitating the local programming of the

International Visitors Center and coordinating the activities of the Mississippi Consortium for International Development.

In an effort to prepare Jackson State University students for the new millennium, a major priority of JSU Global is to provide students with the opportunity to participate in education abroad experiences. Countries in which students can enhance their ability to compete in a global society include Costa Rica, Nicaragua, Mexico, Honduras, South Africa, Russia, Lesotho, Ghana, Japan and other countries throughout the world.

### **English as a Second Language Institute (ESLI)**

Individuals from around the world come to Jackson State University to study English as a second language. The English as a Second Language Institute (ESLI), accredited by the American Association of Intensive English Programs (AAIEP), provides a curriculum that has been developed within the context of the national standards for foreign language learning as well as AAIEP standards. Non-credit courses offered by the ESLI program are periodically updated to be compatible with the goals of the program and to reflect the best current knowledge in the field. ESLI is an integrated, multi-skill program that links grammar, listening, reading, communicative functions and topics which provide training in four categories:

- First-time international students who plan to enroll in long-term academic programs;
- English as a second language classes for international students who require additional ESL training;
- Survival English training for internationals; and
- TOEFL (Test of English as a Foreign Language) preparation.

ESLI offers five levels of training: Beginning, High Beginning, Low Intermediate, High Intermediate, and Advanced with an average instructor-student ratio of 1:4. Four classes are held daily, Monday through Friday, for a total of 25 classroom hours per week. After classes, students are required to visit the multi-media language lab where audio/video equipment and computers with Internet access are at their disposal. For more information about the ESLI, call (601) 979-1611 or 1606 or view the website [www.jsums.edu/global](http://www.jsums.edu/global).

### **International Visitors Center of Jackson**

As a member of the National Council of International Visitors, the International Visitors Center of Jackson (IVCJ) is a part of a network of organizations with the expertise to host international visitors traveling under the auspices of the U.S. Department of States' Bureau of Educational and Cultural Affairs. The IVCJ arranges for international visitors to meet with JSU administrators, faculty and students in order to provide a total perspective of the university. Additionally, IVCJ has been instrumental in developing potential economic linkages between international entities and the state of Mississippi. In conjunction with JSU Global, IVCJ cooperates in the sponsorship of an annual International Festival that

provides a week of symposia, essay competitions, displays of traditional dress, art, song and dance, and a scholarship banquet whose proceeds benefit international students matriculating at Jackson State University. Participants include the JSU Family, elementary and secondary school students throughout the area, and business and professional representatives. The event calls attention to the efforts of OIP and IVCJ in promoting cross-cultural awareness and understanding. For more information, call (601) 979-1611.

### **The Study Abroad Program**

The Study Abroad Program at Jackson State University was established in 1993. It provides the opportunity for JSU students and faculty to experience other cultures, develop friendships and make international professional contacts through the unique perspective of academic coursework. Within its broad mission of internationalizing JSU, the Study Abroad Program allows students and faculty to develop a global awareness by broadening intellectual and cultural horizons through educational opportunities at foreign universities. Interested students and faculty should visit JSU Global to inquire about a summer, a semester, or even a year of study opportunities in the country they have always dreamed of visiting. For more information, call (601) 979-1611.

### **Information Technology**

**The Department of Information Technology** is responsible for the management of the university's network and communications infrastructure, enterprise resource planning system, and other information technology (IT) services that support all levels of research, learning, teaching, and business. IT consists of three units: Academic IT, Computing and Communications, and Information Systems and Integration, all staffed to deliver customer-friendly support to all JSU campuses.

**Academic IT** serves as a liaison between IT and the University. Academic IT's vision focuses on the technological efficiency of academics in utilizing available technology. Academic IT's main goal is to facilitate self-directed manipulation of technological applications. Areas of emphasis include faculty training, LMS support, training and integrations, technology integration in the classroom, technology integration in departments, accreditation evaluations, cybersecurity, campus email, campus apps, JSU website, and campus-wide software (approval and negotiation). Academic IT is responsible for the following products:

- Campus-wide Software Licenses: Microsoft 2016 Office Suite and Office 365, Microsoft Windows 10, SAS, SPSS, Mathematica, Adobe Creative Cloud and Professional, Qualtrics, Edmentum/Plato Learning
- Learning Management System: CANVAS

- Mobile Apps: University App by Ellucian, DoubleMap (Bus Route) and CBORD Get App

**Computing and Communications** - At the core of JSU's IT infrastructure, is a high-speed metropolitan area network that provides ubiquitous connectivity for students, faculty, staff, and administrators. This network provides access to the resources housed in JSU's data centers, as well as those available through the Internet. The Computing and Communications team is charged with managing the University's computing, data, voice and video resources, and services.

**The Computing Team** provides campus-wide desktop computer support to students, faculty, and staff. Other services include telephone, network and operations, campus-wide computer labs, campus-wide server administration, Xerox copier support, video support, and campus operators.

**The Communications Team** currently operates a metropolitan area network that connects every building in which the University does business. The University's network, depicted in Figure 1, consists of a fiber-optic based, 10 gigabit Ethernet campus backbone, with direct fiber links to three satellite campuses: the University Center complex, Jackson Medical Mall, and the Mississippi e-Center. All buildings on the respective campuses are connected via fiber with at least fast Ethernet (1 gig) speed. Within all buildings, the functional areas (offices, classrooms, labs, dormitory rooms, etc.) are connected to the network using fiber and CAT5 structured wiring. In addition, wireless access is provided for 100% of all University premise. Internet access is provided via a 2gig connection to the commodity Internet and a 2x10gbps connection to the Internet2. The campus research network capacity is 100gbps.

The team provides voice services that are provided through the AT&T Hosted Voice Service (HVS) telephone system, which is state-of-the-art Internet telephony fully implementing voice over Internet Protocol (VOIP). All popular calling features are available, including call waiting, 3-way calling, speed dialing, caller ID, and voice mail. The Communications department also procures and delivers cable TV service to the JSU community. Currently, there are more than 1,500 active drops on the main campus, including approximately 1,200 dormitory rooms. JSU's television station, W23BC, is part of the Jackson, MS area Comcast cable TV lineup (Channel 14).

**The Information Systems and Integration Team** is responsible for providing enterprise business support for the campus. The campus uses the Enterprise Resource Planning System, Banner 9. Banner support has been outsourced to Ellucian Managed Services and the system is hosted by Ellucian Cloud Services. Other Ellucian products which supplement Banner include the report

writing and analytic system, COGNOS, the degree audit system, Degree Works, and a document management system, BDMS. In addition to Banner support, this unit is responsible for supporting the campus Marketplace and providing assistance with the development of online storefronts for the campus. The team is also responsible for providing specialized support to administrative units across the campus.

#### **Office of Research and Economic Development**

The Office of Research and Economic Development at Jackson State University is the conduit for the university's interactions with the local community, state, nation, and the world in the area of sponsored programs. The achievements of the university's faculty, staff and students, along with the expertise of the university's scholars are shared with the broader community. The Division creates, promotes and supports a research environment by helping faculty, staff and students identify opportunities and secure externally funded grants, contracts and cooperative agreements.

#### **Sponsored Programs Unit**

The Sponsored Programs Unit (USP) is the centralized unit charged to coordinate research and sponsored program activities campus-wide. The Unit strives to maintain a supportive environment for research and scholarly endeavors, and encourages the faculty and staff to seek external funding to support the mission of the university and to explore alternative means to advance their professional interest. USP seeks to ensure that the most up-to-date funding information is available. To that end, the following services are offered: (1) identifying funding opportunities (2) coordinating proposal and budget development and (3) assisting with project implementation and management.

#### **Mississippi Urban Research Center**

The Mississippi Urban Research Center (MURC) seeks to improve the quality of urban life through the conduct of basic and applied research. The Center collects, analyzes, evaluates and disseminates data on critical urban issues to policy makers, service providers, urban planners, educators and community leaders. Additionally, the MURC conducts instructional and training programs for persons working in or expected to pursue careers in urban public service.

#### **Jackson Heart Study Community Outreach Center**

The Jackson Heart Study is the first large-scale study of cardiovascular disease in African-Americans. Jackson State University is responsible for developing a data center and mobilization of the community. The primary mission of the center is to assure the validity of research findings, provide comprehensive statistical data, in addition to administrative support.

#### **Technology Transfer and Commercialization**

The Division of Research and Economic Development manages the technology transfer, licensing, and commercialization process at Jackson State University. The Tech Transfer Unit assists faculty, staff and students in

identifying research with potential commercial interests and help to develop strategies for how to exploit these interests. Strategies may include patenting, copyrighting and trademarking; seeking licensing opportunities; and promoting startups. The Unit also manages the university's intellectual property portfolio, establishes collaborations between industry and JSU researchers on SBIR and STTR projects, and facilitate the process of obtaining Mississippi Urban Research Authority (MURA) approved status to have material and financial interest in companies.

### **School of Public Health**

#### **The Jackson Heart Study Graduate Training and Education Center**

The Jackson Heart Study (JHS) Graduate Training and Education Center (GTEC) is dedicated to increasing the capacity of graduate Public Health and Liberal Arts students from Jackson State University and medical, nursing, and pharmacology students from University of Mississippi Medical Center to develop “the science and art of preventing disease, prolonging life, and promoting health”. This is done through the Daniel Hale Williams Scholar program that provides a certificate enrichment curriculum that occurs concurrently with the students’ regular academic program. GTEC aspires to improve the science and practice of keeping the public safe and healthy by empowering graduate students to enhance their ability to improve community health as they matriculate through the program with the potential to assume careers in public health or related fields.

Reducing the gap in public health expertise operating in underserved communities, *improving health care delivery*, and eliminating or reducing health disparities are important goals of the GTEC experience. GTEC believes that this can be achieved by recruiting public health professionals to take advantage of the training and resources available from the DHW scholar program. Scholars can upgrade their capacity in academic sessions that cover topics such as epidemiology and basic public health skills, and information relevant to public health practitioners.

### **College of Business**

#### **Small Business Development Center**

The JSU – SBDC is part of a network of Small Business Development Centers across the nation bringing expert business knowledge to small businesses at no cost. The Vision and Mission of the JSU-SBDC are as follows: **Vision** – “to transform Mississippi one business at a time.” **Mission** – to provide high quality technical assistance to aspiring business owners with the goal of getting businesses open or expanded on a sound business and financial footing. The Center has a business library that covers a wide range of business related topics and other resources. Also, clients can access demographic and industry data to help develop their business plan. Contact: JSU – SBDC at 601-979-1100 or via the website: [www.mssbdc.org](http://www.mssbdc.org).

### **College of Education and Human Development**

#### **Cleopatra D. Thompson Curriculum Research and Development Center**

The Cleopatra D. Thompson Curriculum Center, located in Room 314 of the Joseph H. Jackson College of Education Building, serves as the bridge for relevant PK-12 curricula, technology, and best practices for instructional delivery. The center has been redesigned to support the seamless transition between higher education and PK-12 for our college faculty, pre-service teachers, and all education majors. Faculty, students, and staff have access to a variety of multi-media resources and curricular materials for PK-12 classrooms. Special appropriations were allocated to completely upgrade all elementary and secondary textbooks, literature from various countries, and a variety of resources used by candidates in all academic departments. Students and staff have access to tools and materials for designing and constructing two-three dimensional instructional aids. A readily accessible model library of elementary and secondary curriculum materials and textbooks have been collected to assist teacher training courses and to provide practicum experiences for prospective and in-service teachers through simulated classroom experiences.

### **College of Liberal Arts**

#### **Interdisciplinary Alcohol/Drug Studies Center**

This Center is an interdisciplinary unit which provides graduate education, research and service delivery in substance abuse. The Center has five program components: education, research, training, prevention and intervention.

#### **Margaret Walker Center**

Both an archive and museum, the Margaret Walker Center is dedicated to the preservation, interpretation, and dissemination of African American history and culture. Founded by Margaret Walker in 1968, the Center seeks to honor her academic and artistic legacy by expanding and promoting its manuscript holdings and oral history collections, interpreting African American history and culture through its museum and exhibits, coordinating public programs on campus and throughout the community, preserving historic structures central to the African American experience, and advocating Black Studies at Jackson State University.

#### **The Richard Wright Center for Writing, Rhetoric, and Research**

The Richard Wright Center provides an environment for intellectual engagement outside the classroom. At any stage of the creative and research processes, students and faculty have the opportunity to interact with trained tutors using technology as they develop written, oral, and visual representations of their ideas for an academic audience. Support is provided through individual and small-group tutorials, workshops, roundtables, and class presentations.

## **College of Science, Engineering and Technology** **Center for Environmental Health**

The Research Centers in Minority Institutions (RCMI) Center for Environmental Health (CEH) was established in 1998 with a grant from the National Institutes of Health (NIH). Our mission is to develop an innovative biomedical research program in which our investigators become highly competitive and successful in winning mainstream NIH and other federal grants. The Center's long-term goal is to build and sustain a state-of-the-art infrastructure that serves as a platform for interdisciplinary and multidisciplinary biomedical research collaborations. In addition, the Center serves as a catalyst for scientific discoveries on the toxic mechanisms and modes of action of environmental hazards, as well as on the prevention and control of environmentally-induced diseases. For nearly a decade, CEH has addressed the challenges posed by environmentally induced diseases. Its multiuser core biomedical research laboratories and highly capable investigators are pursuing a full range of basic science and translational research programs on environmental and public health issues of concern to vulnerable and underserved communities. New scientific discoveries made at the CEH are making substantial contributions to advancing our understanding of the role played by the environment in the development of human diseases and developing cost-effective strategies to prevent/control these illnesses.

## **Student Services**

### **University Press of Mississippi**

The University Press of Mississippi was founded in 1970 to encourage research and the publication of scholarly work. Functioning as the scholarly publishing arm of the state supported universities in Mississippi, the University Press is governed by a Board of Directors made up of one representative from each of the eight state universities, one representative from the Board of Trustees of Institutions of Higher Learning, and the director of the Press.

### **Health Center**

The Health Center at Jackson State University provides students readily available access to a variety of outpatient medical services for acute illnesses and injuries. Campus wide health promotion is also a major focus of the Health Center. The clinic is located on Prentiss Street across from the Lee E. Williams Athletics and Assembly Center. Office hours are Monday – Friday, 8 a.m. – 5 p.m. The clinic staff includes Physicians, a Women's Health Nurse Practitioner, and Licensed Practical Nurses. The clinic services are available to all registered students as well as faculty and staff. There is no additional fee to use the clinic for students and no appointments are necessary. However, appointments for the family planning services and certain special exams (i.e. sports and military pre-participation physicals) may be required. Also, a fee is charged for certain labs, supplies and prescription medications that may be provided on site by the clinical staff. Faculty and staff are encouraged to join the University Health Center Plan. The plan entitles faculty and

staff to certain clinic services or they can opt to pay a fee per visit to be seen by the clinical staff.

### **JSU Bookstore**

The JSU Bookstore, located on the first floor of the Jackson State University Student Center, is operated as an educational facility coordinated with the academic program. The Bookstore is the campus center for the ordering and selling of textbooks and supplementary reading materials. The Bookstore also carries school supplies and a limited quantity of office supplies. It sells University jewelry (including class rings and pins), pennants, stickers and other insignia items. Commencement caps and gowns are ordered through the Bookstore.

### **Post Office**

The Jackson State University Post Office, a contract station of the United States Postal Service located on the first floor of Jacob L. Reddix Hall, provides all of the mail services, which can be obtained at larger post offices. Basic services include selling of stamps, stamped envelopes and postal money orders, sending and receiving of registered, certified, insured and express mail, and rental of postal boxes. Campus and interdepartmental mail may be routed through the Campus Post Office without postage. Pick-up and delivery services are provided for administrative offices. The zip code for the University is 39217.

### **JSU Development Foundation, Inc.**

The Jackson State University Development Foundation, Inc., a non-profit organization, was established and incorporated under laws of the State of Mississippi in 1968. Its express purpose is to promote the development of Jackson State University. A Board of Directors composed of eminent community leaders in business, industry and education governs the Development Foundation. The Director of Development serves as the Executive Secretary of the Foundation. Contributions, gifts, and bequests are solicited by the Foundation for the advancement of Jackson State University as an institution of excellence. The accrued interest of funds deposited in the Foundation is expended to provide scholarships for deserving students. Contributions to the Foundation, a tax-exempt organization, are deductible.

### **JSU National Alumni Association, Inc.**

The Jackson State University National Alumni Association, Inc., is the official body of graduates and former students of the University organized into local chapters and coordinated by a national board. The major purposes of the Association are to perpetuate the memories of University life and to provide a medium through which the interests of the University may be promoted. Active membership in the Association is open to all graduates and former students of the University upon payment of national dues. The Association is responsible for the promotion of a spirit of fellowship and cooperation among graduates and former students for the welfare and benefit of the University. Some of its activities are special projects designed to enhance

interest and support, such as presentation of the Alumnus of the Year Award and the Outstanding Educator Award; the publication of the Alumni Newsletter; and fund-raising programs. The Office of Alumni and Constituency Relations cooperates with the National Alumni Association in implementing the policies and programs.

### **Institutional Advancement**

The mission of the **Division of Institutional Advancement** at Jackson State University is to work collaboratively to secure financial resources to support its annual fund, student scholarships, faculty/staff development, the endowment, and other institutional priorities and campaign initiatives, strengthen alumni ties and encourage lifelong support of their alma mater, and foster quality communications, internally and externally, to keep stakeholders accurately informed about institutional achievements and our continued educational excellence.

The **Division of Institutional Advancement** strives to achieve its mission through rigorous fund development, stewardship, alumni and donor relations as well as a university-wide marketing communications focusing on consistent messages and branding, public affairs, publications, and web online communication. *These efforts result in building relationships and securing commitments required to advance and sustain the institution's mission and priorities. Additionally, the division leverages the University's intellectual and programmatic resources by increasing philanthropic investments.*

The **Division of Institutional Advancement** carries out its mission through the following departments:

- Alumni and Constituency Relations
- Major and Planned Gifts
- Event and Visitor Services
- University Communications and Marketing
- Community Engagement
- Development Foundation

### **University Communications**

University Communications uses print, broadcast, multimedia, social media and marketing channels to convey clear and consistent communication about the university's achievements and the JSU experience. University Communications also supports academic and administrative departments in such areas as internal communications, event promotion, media relations, graphic design, photography, videography and social media. We can be reached by phone at 601-979-2272.

- **Public Relations** - Public Relations efforts advance the goals of the university by strengthening awareness, engagement and support among constituents vital to the university's success. We seek positive media coverage of the university, its people and programs. We also

communicate externally and internally about the achievements of JSU, its faculty and students through our publications and news site.

- **Marketing** – JSU Marketing is working to better serve the JSU community by reframing their policy and will therefore help the university to better reach their overall goals. Our primary focus will be four key areas that include building brand awareness, increasing enrollment, and promotional support of JSU Athletics and The Division of Institutional Advancement fundraising campaigns. It is our goal and pleasure to work with all departments to ensure university brand consistency. Initiatives that fall outside of these key areas should be submitted to one of the emails below for review, referral, and/or approval.

### **Other Media Outlets**

- **WJSU-FM** - A community resource since June 1, 1976, "Cool and Current" WJSU (88.5 FM) began as a 10-watt station broadcasting from the JSU campus. Now a 24,500-watt entity, the station broadcasts 24 hours daily from the Mississippi e-Center at JSU, reaching Hinds, Simpson, Madison, Rankin and Copiah counties. With membership in National Public Radio, Public Radio International and American Public Media, WJSU offers an intelligent mix of in-depth news, informative talk, jazz and blues. In addition to timely news and timeless music, the station supports community activities and provides practical experience for students majoring in mass communication.
- **JSUTV** – JSUTV, on Comcast Cable Channel 14, offers local programming including Metro Morning Live, JSU events and programs, sports highlights shows, music performances, arts and humanities, community updates, news, public affairs and weather. JSUTV is an affiliate of the America One Network and operates 24 hours a day, seven days a week. The station is broadcast throughout the Jackson Metropolitan area including Hinds, Madison, Rankin, Warren, and Copiah counties. JSUTV reaches approximately 80,000 households.

## Financial Services

Financial Services (Business Office) is located on the second level of the B. F. Roberts Building. The primary function of the Business Office is to provide financial services to students, faculty, staff, and other members of the JSU family. The staff strives to provide courteous, accurate, and timely service to the public in all financial areas. The Business Office is organized to include the areas of Student Accounts, Cashiering, Payroll, Requisitioning, Accounts Payable, Student Loans, Grants/Contracts, and Accounting Services.

## Public Safety (Campus Police)

The Chief of Public Safety reports directly to the Vice President for Business & Finance. The Chief assumes command of assignment of all police staff members; directs the work of police personnel; observes the efficiency of the police officers, and instructs them in the performance of patrolmen duties; takes personal command of the patrolman organization in times of emergencies; supervises investigations; and coordinates the work of the Police Force members on their assignments.

The Public Safety Department was organized under legislative authority granted by Senate Bill No. 1408 and approved April 12, 1954. Officers of the force are vested with the powers and authority to take such action as is necessary to enforce University rules and regulations, including the arrest of violators.

The Public Safety Department is responsible for the general welfare, protection, and security of the students and faculty of the University. In this respect, it is particularly concerned with the following responsibilities: (1) the enforcement of campus regulations governing the parking of automobiles and traffic violations; (2) the maintenance of sound security measures of properties belonging to the University; and (3) the enforcement of rules governing standards of conduct.

## Housing/Residence Life

The mission of The JSU Housing Department is to create an environment that is conducive to living and learning that fosters an appreciation for diversity in all students, as well as fosters communities that create a sense of belonging and provides active learning environments that stimulate the mind, challenges and encourages academic, personal, cultural and social growth and development by providing, facilities that are technologically sound, well maintained, attractive, functional, clean, safe, economical and adaptable. Currently, seven residence halls accommodate more than 2,000 students who wish to reside on campus. Housing/Residence Life is responsible for the operations and maintenance of the residence halls as well as all activities that occur in residence life, such as learning communities, programming, intramural sports, social activities, and leadership workshops. The Residence Hall Association (RHA) assists with enrichment activities and speaks to the interests and concerns of hall residents. The residence halls are located on the north side of campus, in "residence row". The Housing/Residence Life Office is located in Campbell Suites North.

## IMPORTANT NUMBERS

Housing/Residence Life Office.....	601-979-2326
Alexander East Hall.....	601-979-2656
Alexander West Hall.....	601-979-2658
Campbell North.....	601-979-5537
Campbell South.....	601-979-5134
Dixon Hall.....	601-979-2691
McAllister.....	601-979-2085
Tiger Plaza.....	601-714-5856
Tiger Pointe.....	601-944-0291
Transitional Hall.....	601-979-6029
University Pointe.....	601-979-6886

## Dining Services

The primary purpose of the Department of Dining Services, an auxiliary agency of the University, is to enhance campus life through services, superior food quality, and efficient dining service management.

There are six basic Board Membership Plans offered:

- Tiger Platinum: All-access Meal Plan 7 days a week - 19 meals per week. This plan includes \$250 Tiger Bucks.
- Tiger Gold: All-access Meal Plan 7 days a week - 19 meals per week. This plan includes \$100 Tiger Bucks.
- Tiger Silver: All-access Meal Plan 5 days a week - 15 meals per week. This plan includes \$100 in Tiger Bucks.
- Block 25 Meal Plan provides 25 meals per semester.
- Block 50 Meal Plan provides 50 meals per semester.
- Block 50 Plus Meal Plan provides 50 meals per semester and includes \$100 in Tiger Bucks.
- Block 100 Meal Plan includes 100 meals per semester.

Residential student meal plans are automatically enrolled with their JSU Housing assignment. The default meal assignment for residential freshman is the Tiger Platinum plan. Freshmen cannot alter meal plans. Commuter Meal Plans are voluntary, meaning that is it not mandated or required. Tiger Bucks will not be active on a student's account until their registration has been completed with the Business Office. Tiger Bucks can be used at all SodexoMagic on-campus eateries. Student meal plans can only be adjusted within the first two weeks of the semester.

## Latasha Norman Center for Counseling

The Latasha Norman Center for Counseling is a short-term student support service and is committed to working with JSU students experiencing certain adjustment challenges as they matriculate through their academic program and college experience. The mission is to provide services and activities that can assist JSU students as they transition and seek assistance with building their problem solving skills, managing relationships, and becoming more independent and confident.

The Latasha Norman Center for Counseling does not discriminate based on race, ethnicity, gender, sex, age, sexual orientation, physical and mental abilities, socioeconomic status, or religious choice. Jackson State University recognizes and accepts its obligations under the Americans



with Disabilities Act of 1990, Section 504 of the Rehabilitation Act of 1973, and the ADA Amendments Act of 2008, which prohibit discrimination on the basis of disability and require the University to provide reasonable accommodations to otherwise qualified disabled students in all University programs and activities.

### **Institutional Assessment**

A wide range of tests is available at Jackson State University. Presently, testing services administers several national testing programs, a special University testing program and others. The national testing program includes the following:

- *The Graduate Record Examination (GRE)*. The Graduate Record Examination is administered to graduating seniors and is used to evaluate the students' aptitudes and levels of achievement in various fields of concentration. The test is often used as a selective device for graduate school because of the validity of its descriptive and predictive data. The General Test is computer-based and it is administered locally at the Sylvan Learning Center. The Subject-Test is a paper-pencil test and administered on campus.
- *PRAXIS*. Students who plan to enter the teaching profession take the Praxis Examination. The test is used to meet entry-level licensure for employment by many states.
- *The Graduate English Competency Examination (GECE)*. Every entering graduate student at Jackson State University must have evidence of the ability to express himself/herself in writing before becoming a candidate for a degree. The GECE is required of all first-time students enrolled in Graduate Studies. It is to be taken by new students at the scheduled time prior to or immediately after enrollment. The GECE is given during both the Fall and Spring semesters and during the summer term.
- *The Graduate Management Admission Test (GMAT)*. The Graduate Management Admission Test is required for business administration majors. It is a computer-adaptive test that is available in Jackson, MS at the Sylvan Learning Center.
- *The Miller Analogies Test (MAT)*. The MAT is required for several programs. This exam is administered on campus on the second Wednesday of each month. Application deadline is one week prior.

*\*The student should consult the major department and the academic school for specific required examinations.*

### **Oak Ridge Associated Universities**

Since 1994, students and faculty of Jackson State University have benefited from its membership in Oak Ridge Associated Universities (ORAU). ORAU is a consortium of 96 colleges and universities and a contractor for the U.S. Department of Energy (DOE) located in Oak Ridge, Tennessee. ORAU works with its member institutions to help their students and faculty gain access to federal research facilities throughout the country; to keep its members informed about opportunities for fellowship, scholarship, and research

appointments; and to organize research alliances among its members. Through the Oak Ridge Institute for Science and Education (ORISE), the DOE facility that ORAU operates, undergraduates, graduates, postgraduates, as well as faculty enjoy access to a multitude of opportunities for study and research. Students can participate in programs covering a wide variety of disciplines including business, earth sciences, epidemiology, engineering, physics, geological sciences, pharmacology, ocean sciences, biomedical sciences, nuclear chemistry, and mathematics. Appointment and program length range from one month to four years. Many of these programs are especially designed to increase the numbers of underrepresented minority students pursuing degrees in science- and engineering-related disciplines. A comprehensive listing of these programs and other opportunities, their disciplines, and details on locations and benefits can be found in the *ORISE* Catalog of Education and Training Programs, which is available at <http://www.ora.gov/orise/educ.htm>, or by calling either of the contacts below.

ORAU's Office of Partnership Development seeks opportunities for partnerships and alliances among ORAU's members, private industry, and major federal facilities. Activities include faculty development programs, such as the Ralph E. Powe Junior Faculty Enhancement Awards, the Visiting Industrial Scholars Program, consortium research funding initiatives, faculty research and support programs, as well as services to chief research officers. For more information about ORAU and its programs, visit [www.ora.gov](http://www.ora.gov).

### **The Academic Common Market**

Jackson State University participates in the Academic Common Market (ACM), which is a tuition-savings program for college students in the 16 Southern Regional Education Board (SREB) member states who want to pursue degrees that are not offered by their in-state institutions. Students can enroll in out-of-state institutions that offer their degree program and pay the institution's in-state tuition rates. Hundreds of undergraduate and graduate programs are available for residents of SREB states. The ACM eliminates unnecessary duplication of academic programs among participating states, recognizing that it is impractical for any institution or single state to develop or maintain degree programs in every field of knowledge.

The ACM program is not competitive or merit-based, but applicants must meet state residency and college program requirements. Some institutions and states may impose additional acceptance requirements, such as full-time enrollment status or GPA requirements. The following states participate in the ACM: Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, Oklahoma, South Carolina, Tennessee, Texas, Virginia and West Virginia. For more information about the Academic Common Market, please visit: [http://www.sreb.org/page/1395/academic\\_common\\_market\\_faqs.html](http://www.sreb.org/page/1395/academic_common_market_faqs.html) or contact JSU Academic Affairs.

**TOURS**

Visitors are always welcome at Jackson State University. Campus tours are routinely scheduled at 10:00 a.m. and 2:00 p.m. daily with prior notice Monday through Friday. Tours are approximately two hours in length. Individuals and groups interested in touring the campus should contact the Undergraduate Recruitment at (601) 979-5845.

## College of Business



## Dr. Sheila C. Porterfield, Interim Dean

### Dr. Joann White, Interim Associate Dean

College of Business Building

Telephone: (601) 979-2411

Fax: (601) 979-2690

shelia.y.porterfield@jsums.edu

joann.white@jsums.edu

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### Mission

The College of Business provides an undergraduate and graduate management education to a student body that is growing in diversity, by serving students from the southern region, expanding our national presence, and with growing emphasis serving international students. We focus on students and families who value the HBCU educational experience and on educating those from historically disadvantaged backgrounds. Our faculty, serving at the only major urban university in the state of Mississippi, actively engage in research and value excellence in the classroom as they prepare our students to provide creative business-centered solutions that promote economic and social advancement in local and national economies. The College produces ethical, technologically advanced, and globally aware business leaders.

### Vision

The College of Business seeks to be recognized for having a positive impact on the lives of our students, successful career progression of our faculty, and contributions to the prosperity of the local community, metro Jackson, and the State of Mississippi. We will achieve our vision through offering unique educational opportunities and rigorous academic standards in the classroom, providing a supportive environment for faculty to excel in teaching and service, promoting relevant, high quality and highly impactful scholarship, and contributing to the economic development of the region and the state through national and global partnerships with educators and business owners.

The College of Business offers, through the departments of Accounting, Finance, and Entrepreneurship; and Management, Marketing, and Economics, the Master of Business Administration (MBA) in a traditional classroom format and online (MBA Online), the Master of Professional Accountancy (MPA), and Doctor of Philosophy (Ph.D.) degrees.

### BUSINESS GRADUATE PROGRAMS

- Master of Business Administration
- Master of Professional Accountancy

Director: VACANT

College of Business  
1400 J.R. Lynch Street  
P. O. Box 17067  
Jackson, MS 39217  
Telephone: (601) 979-2981  
Fax: (601)979-1205

### DEPARTMENT OF ACCOUNTING, FINANCE AND ENTREPRENEURSHIP

Dr. Bobbie Daniels, Associate Professor and Chair  
P. O. Box 17970  
Telephone: (601) 979-2414  
Fax: (601) 979-2690  
e-mail: bobbie.w.daniels@jsums.edu

#### Faculty

Dr. B. Daniels, Associate Professor  
Dr. P. Fuller, Professor  
Dr. W. Nix, Associate Professor  
Dr. G. Yu, Associate Professor

### DEPARTMENT OF BUSINESS ADMINISTRATION

Dr. Samuel Perkins, Assistant Professor and Chair  
P.O. Box 17760  
Telephone: (601) 979-2534  
Fax: (601) 979-2690  
e-mail:

#### Faculty

Dr. O. Anyamele, Professor  
Dr. J. Assad, Associate Professor  
Dr. Young Sik Cho, Assistant Professor  
Dr. H. Chong, Associate Professor  
Dr. D. Didia, Professor

Dr. F. Ezeala-Harrison, Professor  
Dr. P. Freeman, Associate Professor  
Dr. M. Granger, Professor  
Dr. S. Perkins, Assistant Professor  
Dr. J. R. Smith, Professor  
Dr. P. Thiagarajan, Associate Professor  
Dr. J. White, Assistant Professor

### **Goals of the Master of Professional Accountancy Program**

The MPA degree as structured is viewed as a terminal degree necessary for entry into professional accounting positions in public accounting, industry, government and health and social institutions.

The goals of the MPA program are:

- ❶ To instill in students a broad perspective of the accounting environment;
- ❷ To equip students with specific skills thereby enabling them to function productively;
- ❸ To provide students with a basic core of knowledge in business and management.

### **Goals of the Master of Business Administration Program**

The MBA degree is designed to prepare working professionals for managerial and professional leadership responsibility in business, industry, and government.

The goals of the MBA program are:

- To develop advanced knowledge of business strategies and their application
- To apply global and ethical perspectives to business decision-making
- To build critical thinking, problem solving, and innovation skills
- To develop communication, leadership, and project management skills.

### **Admission Requirements**

Admission to the MBA, MBA Online, and MPA programs is competitive. Students seeking admission to the MBA or MPA program must apply to the Graduate School online and submit the following admission portfolio materials.

1. Application to the Graduate School completed online;
2. Official undergraduate and graduate transcripts sent to the Graduate School; JSU alumni transcripts can be accessed electronically and do not need to be sent;
3. International applicants or those with degrees from international institutions must have their transcripts translated, if needed, and evaluated from a reputable international transcript evaluation agency;
4. Statement of Purpose uploaded to the application portal providing background information, motivation for pursuing graduate business education, and how the degree will help achieve professional goals;
5. Current professional resume uploaded to the application portal;

6. 3 Letters of recommendation from academic and/or professional references sent directly to the application portal;
7. Official GMAT score taken within the past five years;
8. An interview is optional;
9. Application fee of \$25.00 for non-Mississippi residents;
10. Official TOEFL scores or IELTS (for international students only)

The GMAT may be waived under certain conditions such as: 3.0+ undergraduate GPA from a regionally accredited institution; OR 3-5 years of professional work experience; OR a professional certification in a business field such as CFA, PHR, CPA etc.; OR an earned graduate degree such as MS, JD, MD, PhD.

A prospective student's overall application portfolio is evaluated to discern program fit and potential for success. A "cut-off" score for the GPA and GMAT are not used.

### **Regular Admissions**

To be considered for Regular Admission into the MBA or the MPA program, an applicant must have at least a 3.0 cumulative undergraduate GPA from a regionally accredited institution.

### **Conditional Admissions**

The College of Business may admit a limited number of students who meet with a cumulative undergraduate GPA of 2.5 - 2.99 whose application portfolio demonstrates strong potential for academic success. The number of students admitted in this category will not exceed 20% of the total number of students granted Regular Admission for the semester of application.

### **Scholastic Requirements**

1. The College of Business requires all MBA and MPA students to maintain a minimum cumulative 3.00 grade point average.
2. A student who falls below 3.00 cumulative average (GPA) is placed on academic probation and will be requested to appear for counseling.
3. A student who falls below a 3.00 average for two consecutive semesters will be dismissed from the program.
4. The Graduate English Competency Examination must be taken during the first semester of graduate studies. If a student fails the examination, they must register for ENG 500- Advanced Lab Writing, the second semester of graduate studies. This course cannot be used as an elective for the MBA or the MPA degree.
5. No credit will be granted for any course with an assigned grade below "C" as applicable toward meeting the requirements for the MBA or MPA degree.
6. Any course to be taken outside the College of Business to be applied toward the degree requirements must receive prior approval in writing from the Director of Business Graduate Programs.
7. A minimum GPA of 3.00 is required overall and in required MBA and MPA courses for graduation.

## MASTER OF PROFESSIONAL ACCOUNTANCY

The MPA Program is open to anyone who has a baccalaureate degree from an accredited institution. The program consists of 30 semester hours of graduate course work. Generally, students with an undergraduate degree with a major in accounting will only have to take 30 semester hours of graduate work.

Students with an undergraduate degree with a major in a business discipline other than accounting must complete the undergraduate accounting prerequisite hours listed below before enrolling in graduate accounting courses.

Students with an undergraduate degree other than business or accounting must complete the undergraduate accounting and general business prerequisite hours listed below before enrolling in graduate courses.

### **Undergraduate Prerequisite Courses**

#### **Accounting**

<b>Course</b>	<b>Title</b>	<b>Semester Hours</b>
ACC 211	Principles of Financial Accounting	3
ACC 212	Principles of Managerial Accounting	3
ACC 314	Intermediate Accounting I	3
ACC 315	Intermediate Accounting II	3
ACC 423	Income Tax Accounting	3
ACC 455	Auditing	3
	<i>Total hours</i>	18

#### **General Business**

GB 201	Intro to Legal Aspects of Business	3
ECO 359	Business Statistics	3
ECO 211	Principles of Macroeconomics	3
ECO 212	Principles of Microeconomics	3
MNGT 330	Management to Organizations	3
MKT 351	Marketing Management	3
	<i>Total hours</i>	18

### **Graduate MPA Courses**

#### **Accounting**

<b>Course</b>	<b>Title</b>	<b>Semester Hours</b>
ACC 540	Advanced Managerial Accounting	3
ACC 541	Advanced Accounting Theory	3
ACC 557	Seminar in Attestation	3
ACC 565	Seminar in Gov. & NFP Accounting	3
ACC 575	Research in Taxation	3

#### **Electives: Accounting Courses (Select Two)**

ACC 536	Advanced and International Accounting	3
ACC 573	Advanced Income Tax Accounting	3
ACC 592	Accounting Information Systems	3
ACC 545	Financial Statement Analysis	3
ACC 561	CPA Review	3

#### **\*Business Courses**

MNGT 520	Productions & Operations Management	3
MNGT 516	Statistics for Business Decisions	3
FIN 515	Managerial Finance	3

#### **\*Business Courses**

MPA students must complete 9 hours of graduate non-accounting business elective FNGB 515, Managerial Finance; MNGT 516, Statistics for Business Decisions; and MNGT 520, Productions & Operations Management are required for students who have not recently completed similar courses in their undergraduate studies. Students who have recently completed similar undergraduate courses (e.g., production management or quantitative business analysis; six hours of statistics) may select other business electives, subject to the approval of the MPA advisor.

#### **Selection of Accounting Electives is Subject to the Following Constraints**

1. Most accounting electives are split-level course offered to an individual student for either undergraduate or graduate credit but not both.
2. ACC 536 Advanced and International Accounting is required for MPA students who did not complete an equivalent undergraduate course.
3. ACC 592 Accounting Information Systems is required for MPA students who did not complete an undergraduate accounting information systems course.

## MASTER OF BUSINESS ADMINISTRATION

Admission to the MBA Program is open to all students who have satisfactorily completed a baccalaureate degree from an accredited four-year institution. Students with a baccalaureate degree in business generally have met the undergraduate prerequisites necessary prior to enrollment in the MBA curriculum. Students with undergraduate degree outside the business discipline must satisfy undergraduate prerequisites in the functional areas of business, (accounting, economics, finance, management, marketing, and statistics) before enrolling in the MBA curriculum. Please consult the Graduate Program Director for additional details.

The MBA curriculum consists of a total of 30 credit hours of graduate business courses in the areas of accounting, economics, finance, management, marketing and statistics. Of the 30 credit- hours, 24 hours constitute the program core requirements and must be completed by all MBA students. The remaining 6 hours are restricted business electives.

To encourage timely completion of program requirements and to avoid course-scheduling conflict, students are advised by the Business Graduate Programs Office concerning sequential course offering and additional scheduling details.

### Undergraduate Prerequisites for the MBA

Course	Title	Semester Hours
ACC 211	Principles of Financial Accounting	3
ACC 212	Principles of Managerial Accounting	3
ECO 211 & 212	Principles of Economics I & II	6
FIN 320	Business Finance	3
ECO 357 & 358	Business Statistics I & II	6
MNGT 330	Management to Organizations	3
MKT 351	Marketing Management	3
BPD 325	Business Communications	3
	<i>Total</i>	30

### MBA Curriculum (30 Credit-hours)

#### Core Requirements

Course	Title	Semester Hours
MNGT 502	Human Rel. & Org. Behavior	3
MNGT 516	Statistics for Business Decisions	3
MKT 530	Managerial Marketing	3
ACC 540	Managerial Accounting	3
MNGT 520	Adv. Production & Oper. Mngt.	3
ECO 530	Managerial Economics	3
FIN 515	Managerial Finance	3
MNGT 560	Seminar in Business Policy	3
	<i>Hours</i>	24

#### Restricted Electives (6 credit-hours); choose any two of the following:

ECO 511	Macroeconomic Theory	3
ACC 545	Financial Statement Analysis	3
FIN 561	Business Research Projects	3
ACC, MNGT, MKT, ECO, or ENTR	Elective	3

To encourage timely completion of program requirements and to avoid course-scheduling conflict, students are advised to consult the Business Graduate Programs Office for information about sequential course offering and additional scheduling details.

### Recommendations for a Second Degree

① **MBA: First Degree; MPA Second Degree**  
After completing the MBA, a student wishing to complete the MPA must submit:

1. An Application to the Division of Graduate Studies for the MPA program.

2. An official MBA transcript to the Division of Graduate Studies.
3. Three letters of recommendation from MBA professors to the Office of Graduate Business Programs.

If admitted for the second degree, the student must complete all undergraduate accounting prerequisite before completing the following 18 graduate credits hours in Accounting.

ACC 541 Advanced Accounting Theory  
ACC 565 Seminar in Government & Non-Profit Accounting  
ACC 575 Research in Taxation  
ACC 557 Seminar in Attestation  
ACC xxx Elective  
ACC xxx Elective

#### ① MPA: First Degree; MBA Second Degree

After completing the MPA, a student wishing to complete the MBA must submit:

1. An Application to the Division of Graduate Studies for the MBA program.
2. An official MPA transcript to the Division of Graduate Studies.
3. Three letters of recommendation from MPA professors to the Office of Graduate Business Programs.

If admitted for the second degree, the student must complete all undergraduate accounting prerequisite before completing the following 18 graduate credit hours.

MNGT 502 Human Relations and Organizational Behavior  
MNGT 560 Business Policy  
MKT 530 Managerial Marketing  
ECO 530 Managerial Economics  
MBA Elective ENTR, MKT, ECO, MNGT or FNGB  
MBA Elective ENTR, MKT, ECO, MNGT or FNGB

NOTE: Students wishing to pursue the second degree must contact the MBA academic advisor, the MPA academic advisor, or the graduate program director to develop the appropriate plan of study to ensure timely completion of requirements.

### Master of Business Administration Online Program

The MBA Online program is designed to enable working adults to obtain a JSU quality education while still maintaining their commitments to family and work.

#### MBA Online Curriculum

Students with a baccalaureate degree in business generally have met the undergraduate pre-requisites necessary prior to enrollment in the MBA curriculum. The MBA on-line curriculum consists of a total of 30 credit hours of graduate business courses in the areas of accounting, economics, finance, management, marketing and statistics. The 30-hour curriculum will be delivered over 5 eight-week terms during a period of 12 calendar months. Students may complete the

program in one or two years by taking either one or two courses during each eight-week term. Students with undergraduate (and/or graduate degrees) outside business are required to complete a 3 credit hour pre-requisite course : GB-500 Business Principles offered each fall during the first eight-week term.

GB 500	Business Principles
MNGT 502	Human Relations and Organizational Behavior
ACC 501	Financial Accounting & Analysis
MKT 530	Managerial Marketing
ACC 540	Managerial Accounting
FIN 547	Investments
FIN 515	Managerial Finance
ECO 530	Managerial Economics
MNGT 516	Statistics for Business Decisions
MNGT 520	Advanced Production and Operations Management
MNGT 560	Seminar in Business Policy

## DESCRIPTION OF COURSES

### Accounting

**ACC 501 Financial Accounting & Analysis** (3 Hours) Prerequisites: none). A study of accounting transaction including the adjusting and closing process, financial statements preparation, and tools and techniques of financial statement analysis relative to financial position, results of operations, and cash flows as reported in corporate annual reports.

**ACC 536 Advanced and International Accounting** (3 Hours) Prerequisites: ACC 314, 315. A study of advanced accounting issues concerning partnerships, consolidations, international operations, and International Financial Reporting Standards. Not open to those who completed ACC 436 at the undergraduate level.

**ACC 540 Advanced Managerial Accounting** (3 Hours) Prerequisites: ACC 211, 212. Study of managerial uses of accounting information and trends in internal accounting functions.

**ACC 541 Advanced Accounting Theory** (3 Hours) Prerequisite: ACC 315. A brief historical development of accounting thought followed by an intensive investigation of the theoretical framework on which accounting principles and procedures rest.

**ACC 545 Financial Statement Analysis** (3 Hours) Prerequisites: ACC 211, 212. This course offers a study of the tools and techniques utilized to analyze financial positions, results of operations, and cash flows as reported in corporate annual reports.

**ACC 557 Seminar in Attestation** (3 Hours) Prerequisites: ACC 314, 315. Study and refinement of generally accepted auditing standards, procedures and extension of auditing procedures; study of special investigations and audit reports; review of recent auditing trends, research, and pronouncements.

**ACC 561 CPA Review I** (3 Hours) Prerequisite: ACC 314. A review of selected topics as tested on the Uniform CPA Examination.

**ACC 565 Seminar in Governmental and Not-for-Profit Accounting** (3 Hours) Prerequisites: ACC 211, 212. A study of generally accepted accounting principles of state and local

governments and selected nonprofit entities with an emphasis on current developments in these areas.

**ACC 573 Advanced Income Tax Accounting** (3 Hours) Prerequisite: ACC 423. A study of federal and state income tax laws for fiduciaries, partnerships, and corporations utilizing modern research technology. Not open to those who completed ACC 473 at the undergraduate level.

**ACC 575 Research in Taxation** (3 Hours) Prerequisite: ACC 423. A study of selected tax issues and the application of tax research methodology. Topics include the tax research environment, primary and secondary sources of federal tax law, and implementing tax research tools.

**ACC 581 Special Topics** (3 Hours) Prerequisites: ACC 211, 212 and consent of the Instructor. Directed study of contemporary topics in accounting practice.

**ACC 583 Seminar in International Accountancy** (3 Hours) Prerequisite: ACC 211, 212. This course offers a study of GAAP, GAAS and professional accountancy in a global context. Topics include diversity in reporting practices, International Financial Reporting Standards, and emerging issues.

**ACC 592 Accounting Information Systems** (3 Hours) Prerequisite: ACC 314. A study of theory and practice as applied to accounting information systems. The course examines the process for purchasing or designing accounting systems and a variety of topics dealing with the role of technology in building, implementing, controlling, and auditing accounting information systems. A secondary goal of the course is to help students become more comfortable using computer-based tools including e-mail, accounting software and the World Wide Web. Not open to those who completed ACC 492 at the undergraduate level.

### Economics

**ECO 500 Environmental Economics.** (3 Hours) This course is concerned with a theoretical framework for the analysis of environmental problems, including concepts of market failure and externalities, materials balance and property rights. The policy implications of this analytical model are explored for a range of topics including pollution and the preservation of natural environmental species. It also explores the effects of economic growth on the environment to include the interrelationships between the economics activity and the environment. Cost benefit analysis, and the application of the economic theory of external economies and diseconomies and welfare economics is applied to problems of the physical and socioeconomic environment.

**\*ECO 511 Macroeconomic Theory.** (3 Hours) Macroeconomic concepts relating to the theory of income and employment. Analysis of changes in the level of economic activity, economic growth and inflation.

**\*ECO 512 Microeconomic Theory.** (3 Hours) Detailed analysis of traditional microeconomic theory, including consumer behavior theories, theories of production, cost curves, market structure and factor price determination.

**ECO 514 Manpower Problems.** (3 Hours) The development of the economic conditions, which prevent different groups of people from acquiring marketable skills. The impact of the unemployables on the free enterprise system and a survey of federal legislation designed to eliminate the economic conditions, which prevent these groups of people from entering the labor markets.

**ECO 516 History of Economic Thought.** (3 Hours) Development of the analytical tools and concepts, which comprise economic theory with special emphasis on the contributions of the classical economists, Marginalists, Neo-classicists, Institutionalists and Keynes.

**ECO 530 Managerial Economics.** (3 Hours) Economic tools of analysis in the operation of a business; applied microeconomic, to solve selected business problems and to aid decision making in business firms and other organizations.

**ECO 540 Monetary Theory.** (3 Hours) An examination of monetary theories. A discussion of the quantity theory, the demand for money, the velocity of money, interest rates theory, and the flow of money among the various sectors of the economy.

**ECO 541 Monetary Policy.** (3 Hours) A detailed analysis of neoclassical theories of central banking, debt management, and financial intermediaries and their impact on the level of employment, prices and economic growth. The development of appropriate monetary policy over the course of the business cycles. A discussion of current issues concerning monetary policy.

**ECO 544 Public Finance.** (3 Hours) An economic analysis of government expenditures and receipts; the pricing of government services to the public. The economic impact of government expenditures and taxation on the level of income, employment, economic growth and the allocation of scarce resources.

**ECO 546 International Economics.** (3 Hours) A development of the classical, neoclassical and modern theories of international trade and the economic benefits derived. The impact of international trade on the economics of the world and the formulation of the appropriate international trade policy.

**ECO 555 Economic Development of Blacks.** (3 Hours) A survey of the basic economic conditions of Blacks and the development of strategies designed to improve their economic development. A detailed analysis of federal legislation to improve the economic conditions of Blacks. A discussion of the impact of Black Capitalism on the economic development of Blacks. A discussion of the different theories and ideologies of the government, labor unions, big business, civil rights organizations as to how Blacks can best achieve economic development.

**ECO 556 Urban Economics.** (3 Hours) A detailed economic analysis of the major economic problems facing the government of our central cities, such as, transportation, the flight to the suburbs by high income groups, education, housing, and taxation. A survey of the different theories and ideologies on the part of economists, government officials, business leaders, and politicians as to how the problems of our cities can best be solved.

**ECO 558 Statistics.** (3 Hours) Classical statistics and regression analysis; descriptive statistics, probability, point and interval estimation, decision theory, variance analysis, linear regression, and least square estimates.

**ECO 570 Economics Seminar.** (3 Hours) Guided individual research in current economic problems, including research methodology.

**ECO 599 Thesis Research.** (3 Hours) Preparation of thesis required of all students writing master's thesis in economics.

## Finance

**FIN 503 Environmental Concepts in Business Administrations** (3 Hours) Prerequisites: FNGB 201, 302, MNGT 330 or equivalent. An analysis of environmental factors relating to the business organization including labor, government, public ethics, and international forces.

**FIN 504 Legal Environment of Business.** (3 Hours) Prerequisites: FNGB 201 and/ or 302 or equivalent. The operation of the business organization in studies relative to the legal aspects of its operational environment.

**FIN 515 Managerial Finance.** (3 Hours) Prerequisites: FNGB 320 or equivalent. A study of capital budgeting techniques, methods of determining a firm's cost of capital, valuing stocks and bonds, and international finance.

**FIN 547 Investments** (3 Hours) Prerequisites: (none).

A finance seminar on investment environment, various developments in investment theory, and the principles and practices of valuation of various assets for the graduate/MBA level students. It covers the skills to conduct fundamental and technical analyses of investment vehicles. The analyses of fixed-income securities, equity securities, and other types of investment vehicles will be discussed. The topics also include the investment process, asset allocation, investment performance evaluation. Throughout the course, a global perspective will be emphasized.

**\*FIN 561 Seminar in Business Administration and Research Project.** (3 Hours) Prerequisite: 24 hours of MBA course work. Requirement: Supervised individual research relative to the student's research project required for completion of the degree program.

**GB 500 Business Principles.** (3 Hours) Prerequisites: none. Business Principles (GB 500) offers MBA students an effective way to prepare for the MBA program, via an interactive series of pre-MBA courses, designed by experts in their respective fields of study. Academic study modules incorporate text and interactive applications to teach the concepts, while quizzes and tests assess students' understanding of the substantive materials presented. The MBA Primer Comprehensive Edition, is utilized in the course. This primer includes the following individual academic subject areas: Finance, Financial Accounting, Managerial Economics, Business Statistics, Marketing Management, Production/Operations Management, Business Law and Ethics. The course is particularly necessary and beneficial for students who did not major in or take a substantial number of undergraduate business courses. However, the course proves to be an excellent reference source for undergraduate business majors. The course is instructor-led at an accelerated pace.

## Marketing

**\*MKT 530 Managerial Marketing.** (3 Hours) Prerequisites: MKT 351, ECO 357, 358, ACC 211, and 212, and ECO 211, 212 or equivalent. Integration of the concepts of marketing with decision-making relative to marketing management situations.

**MKT 531 Special Problems in Marketing.** (3 Hours) Prerequisite: MKT 530 or equivalent. Advanced study of marketing theories with emphasis upon quantitative techniques applied to marketing problems.

**MKT 532 Advertising.** (3 Hours) Prerequisite: MKT 530. Is an advanced advertising course in the Field of Marketing. This course is designed to introduce the student to the advertising



decision areas: Advertising Objectives, Advertising Copy and Design, Advertising Media, Media Vehicles and Schedules, Advertising Budget and Advertising Campaigns.

**MKT 538 Marketing Research.** (3 Hours) Prerequisite: MKT 530. Study of Scientific Methodology and major techniques used to design, collect and analyze research data pertaining to marketing problems. Students are responsible for designing a marketing research project, developing a questionnaire, collecting data, computer analyzing the data, via cross tabulation and other univariate and multivariate techniques, and preparation of a final report. Students will also be responsible for evaluating and assessing current published marketing research projects.

**MKT 540 Consumer Behavior.** (3 Hours) Prerequisite: MKT 530. This course is designed to introduce the student to "The State of the Art" in buyer research and theory. Contemporary issues such as Consumerism (E.G. Consumer Behavior, Regulation and Consumer Liabilities, redress, etc.); Black Buyer Behavior; Regulation and Consumer Behavior; and Consumer Thought Processes (e.g. perceptions, attitudes, cognitions, conations, opinions, interest, intentions and pre and post purchase behaviors) will be the major focal areas for this course.

**MKT 566 International Marketing.** (3 Hours) Prerequisite: MKT 530. Study of the similarities and differences between domestic marketing and international marketing, an examination of strategic international marketing for developing a complete marketing plan for a product and a country of their choice.

### Management

**\*MNGT 502 Human Relations and Organizational Behavior.** (3 Hours) Prerequisite: MNGT 330 or equivalent. A study of organizational theory, group behavior, motivation, and systems applications to organizational management.

**MNGT 510 Mathematical Analysis for Management.** (3 Hours) Prerequisite: MATH 111. To be taken if the student has not had college level calculus. Concepts of analysis: sets, relations, functions, limits differentiation, sequences, integration, and matrix algebra. Applications to business problems are emphasized. This course cannot be used as an elective.

**MNGT 511 Computer Applications in Management.** (3 Hours) A survey of the use of the computer as a tool for decision-making, communication, and research. This course will include the use of the computer as a support for all business activities: word processing, database, spreadsheet, graphics, electronic mail, Internet, World Wide Web, and Internet.

**\*MNGT 516 Statistics for Business Decisions.** (3 Hours) Prerequisites: MATH 231 and/or MNGT 510, ECO 357, 358 or equivalent. A study of data collection, presentation, and analysis including interval estimation, hypothesis testing, Bayesian analysis, regression, and correction techniques.

**MNGT 520 Advanced Production Management.** (3 Hours) Planning, organizing, and controlling production with emphasis upon contemporary quantitative techniques and their applications.

**MNGT 555 Business and Ethics.** (3 Hours) The task of business ethics is the systematic study of ethical values that ought to guide human conduct; the study of what constitutes the obligations and responsibilities of agents and institutions; the examination of predictable outcomes in human costs and

benefits; the study of character traits or dispositions-all in the interests of promoting human welfare.

**\*MNGT 560 Business Policy.** (3 Hours) Requirement: This course is to be taken after the student has completed at least 27 hours in the MBA Program. Business policy is an interdisciplinary capstone course, which focuses on all aspects of business.

**\*Required MBA course**

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## Doctoral Program in Business

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Director: VACANT

P. O. Box 17760  
Jackson, MS 39217  
Telephone: (601) 979-4326  
Fax: (601) 979-1205  
E-mail:

### Program Objectives

The Doctor of Philosophy in Business program is designed to add to the theoretical knowledge base and other skills acquired at the master's level and to develop outstanding scholars in their respective fields of study.

The specific objectives of the program are:

1. To provide the students with advanced theoretical, analytical and research training in their given fields of study. At the onset, training leading to the doctor of philosophy degree will be provided in the areas of accounting, economics and management;
2. To expose the students to the classical as well as the most current methodologies in their fields;
3. To develop academic scholars who will use their knowledge and skills to investigate issues and problems facing their communities and to develop appropriate solutions to those problems; and
4. To prepare students for careers in university teaching and research.

### Admissions

Jackson State University offers admission to the doctoral program in the College of Business to students who have the potential to become excellent teachers and researchers, and who will provide service to the business community and the general population. The criteria for admission are:

1. Master's degree from an accredited college or university;
2. Satisfactory Graduate Management Admission Test (GMAT) score(s). Only scores on tests taken within the last five (5) years will be accepted. Scores should be sent directly from the Educational Testing Service (ETS);
3. Satisfactory TOEFL score (international students only);
4. Three (3) completed recommendation forms;
5. Satisfactory previous academic record. Please submit an official transcript from every college and university attended;
6. Statement of career plan and objective.

Admission to the doctoral program in the College of Business is during the fall semester only. The deadline for submitting the application package is March 15 of each academic year. Applicants will receive a written admission decision by April 15. Completed admission applications, transcripts, letters of recommendation, financial aid forms, statement of purpose, and other requested information should be submitted to:

Director of Doctoral Program  
College of Business  
Jackson State University  
P.O. Box 17760  
Jackson, MS 39217

### Transfer of Credit

Graduate courses taken at another institution accredited by the American Assembly of Collegiate Schools of Business (AACSB) may be accepted toward satisfying degree requirements at Jackson State University provided a grade of at least "B" was earned in the course. The Department Chair of the respective major, the Director of the Doctoral Program, and the Dean of the College of Business must evaluate all transfer courses during the initial semester of enrollment.

### Advising

Each doctoral student in the College of Business will be assigned an academic advisor by the chair of the student's major during the first semester of enrollment. The advisor will provide guidance to the student in course selection and other academic matters pertaining to the program of study. After satisfactory completion of the required coursework, the comprehensive examinations, and the selection of the Dissertation Committee, the chair of the Dissertation Committee will serve as the student's primary academic advisor.

### Areas of Concentration

The Doctor of Philosophy in Business will be offered in three areas: Accounting, Economics, and Management.

### Residence Requirement

The doctoral degree in business is a full-time day program. Students entering the program should be able to meet all requirements for the Ph. D. degree within a four-year period. Therefore, students should take an average of nine (9) credit hours per semester during the four-year period.

### Time Limit for Degree

A student has seven (7) years from the initial semester of enrollment to complete all requirements for the Ph.D. degree. Failure to satisfy all requirements during this time period may result in academic suspension. A suspended student may file an appeal for readmission to the Dean of the College of Business within one semester from the suspension decision. The appeal may be granted only under well-documented and extenuating circumstances.

### Graduation Requirements

To graduate with a Ph.D. degree in the College of Business, the student must satisfy all requirements listed below:

1. A grade point average of at least 3.0 in all courses taken at the doctoral level at Jackson State;
2. A passing score on all written and oral comprehensive examinations;
3. Successful completion and defense of a dissertation approved by the Dissertation Committee; and
4. Submission of three (3) copies of the final draft of the dissertation to the Office of the Doctoral Program Director.

### Language Requirement

Jackson State University does not require doctoral students of the College of Business to satisfy a language requirement. Students are strongly encouraged to acquire a level of proficiency in a foreign language. Also, students are expected to have a level of proficiency with the use of computers.

### Academic Responsibility of the Student

Students are required to observe all university guidelines and regulations contained in the University Graduate Catalog. Those regulations apply to the doctoral program and all doctoral students. The Department Chair and the Director of the Doctoral Program will review the academic record of each student enrolled in the doctoral program at the end of each semester. Students must maintain a cumulative 3.0 average to remain in the program in good standing. Students with a cumulative grade point average below 3.0 will be given two semesters to remove the deficiencies. Failure to do so may result in dismissal from the program. No doctoral level course with a grade less than "B" will be accepted toward satisfying the requirements for graduation.

### Program Requirements

The curriculum leading to a Ph.D. in Business is developed under the assumption that the typical student has already completed a master's degree in business administration or a related field. Typically, a doctoral student, who has satisfied the necessary prerequisites (undergraduate prerequisites and the graduate business core), will complete twelve (12) credit hours of a research core, eighteen (18) to twenty-four (24) credit hours of coursework in the major field, six (6) to nine (9) credit hours in a supporting field, and twenty-one (21) hours of dissertation research to meet the requirements for the Ph.D. degree in Business.

Following admission into the doctoral program, all students must complete four phases of study which include:

1. **Phase I:** Development and approval of an individual program of study with the assistance of the faculty advisor and completion and/or satisfaction of the graduate business core and all curriculum;
2. **Phase II:** Doctoral level coursework;
3. **Phase III:** Satisfactory completion of relevant field examinations;
4. **Phase IV:** Satisfactory completion of the dissertation process

### Phase I: The Plan of Study and the Graduate Business Core.

Each student will be assigned a faculty advisor when admitted to the doctoral program. The faculty advisor will assist the student in the development of a plan of study to be followed throughout the completion of the program. The plan of study, co-signed by the student, the faculty advisor, the department chair and the director of the doctoral program, will be part of the student's permanent record.

### Graduate Business Core

Prior to engaging in the pursuit and completion of the actual doctoral curriculum, the student must show evidence of having

satisfactorily completed the graduate business core composed of 27 hours of coursework in accounting, economics, finance, management, and marketing. Satisfactory completion requires that the student earns at least a "B" in every course included in the core. The majority of those courses are usually included in a typical MBA curriculum.

To the extent that some of those courses were not completed prior to admission, the student will be advised to complete the coursework before matriculating in the doctoral curriculum.

The following courses constitute the graduate business core:

Course	Title	Semester Hours
ACC 540	Advanced Managerial Accounting	3
ACC 545	Financial Statement Analysis	3
ECO 511	Macroeconomic Theory	3
ECO 512	Microeconomic Theory	3
FNGB 515	Managerial Finance	3
MNGT 516	Statistics for Business Decisions	3
MNGT 560	Business Policy	3
MKT 530	Managerial Marketing	3
MNGT 520	Advanced Production Management	3

### Phase II: Doctoral Coursework Requirements.

Phase II constitutes the actual doctoral level coursework. It consists of forty-two (42) credit hours of coursework organized under four basic categories: the research core, a course in teaching methodologies, the courses in the major concentration, and the courses in a supporting field:

1. The "research core" contains 12 credit hours of courses in statistics and research methodologies;
2. A course (three credit hours) in teaching methodologies;
3. The "major concentration" component contains 18 to 24 credit hours in the student field of interest. As part of the 18 to 24 credit hours in the field of specialization, the student will complete at least six hours of seminar-type courses aimed at exploring and analyzing the classical and current theoretical and empirical issues in the field; and
4. The "supporting field" component contains six (6) to nine (9) credit hours in the student's minor field.

### Research Core

All students, except those majoring in Economics, must satisfactorily complete the following 12 hours that constitute the research core:

Course	Title	Semester Hours
MNGT 710	Advanced Statistical Methods I	3
MNGT 711	Advanced Statistical Methods II	3
MNGT 712	Applied Multivariate Analysis	3
MNGT 714	Research Methods	3

Students majoring in Economics will complete two courses in Econometrics in lieu of MNGT 711 and MNGT 712. For those students, the research core will include the

following:

Course	Title	Hours
MNGT 710	Advanced Statistical Methods I	3
ECO 760	Econometrics	3
ECO 762	Advanced Econometrics	3
MNGT 714	Research Methods	3

### Teaching Methodology Requirement

As teaching remains an important component of the school's and the university's mission, and a specific goal of the program is the development of outstanding scholars with the potential to become college professors, all doctoral students will be required to complete a course in teaching methodologies and will be assigned at some point some degree of classroom instruction.

Course	Course Title	Semester Hours
BEAS 790	Teaching Methods in Business	3

### Courses in Major Field: Accounting

The 21 semester hours of accounting courses listed below are required of all accounting majors. The 500-level accounting courses may be transferred into the program if there is evidence they or their equivalents have been completed satisfactorily. The 700-level courses may not be transferred into the Ph.D. program.

The student's faculty advisor will determine the specific courses assigned to an individual student at the beginning of the first semester of enrollment. Students will be awarded the Ph.D. degree after successful completion of the doctoral curriculum and all other university requirements. Additionally, students with a non-business-related master's degree must follow the special note for applicants without an MBA.

Course	Title	Semester Hours
ACC 536	Advanced Accounting Problems	3
ACC 541	Advanced Accounting Theory	3
ACC 565	Seminar in Governmental and Nonprofit Accounting	3
ACC 575	Research in Taxation	3
ACC 790	Seminar in Accounting Education and Regulation	3
ACC 791	Seminar in Accounting Research Methodology I	3
ACC 792	Seminar in Accounting Research Methodology II	3

### Dissertation Requirement

ACC-799	Ph.D. Dissertation Research in Accounting	3
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(Course may be repeated; a minimum of 21 credit hours is required)

**Note-**The following courses are considered prerequisites for Ph.D. level accounting courses. Most must be completed prior

to enrollment in 500-level graduate courses and all must be completed prior to enrollment in 700-level Ph.D. seminar courses. Consult your faculty advisor for additional details.

Course	Title
ACC 314	Intermediate Accounting I
ACC 315	Intermediate Accounting II
ACC 423	Income Tax Accounting
ACC 455	Auditing
ACC 457/557	Advanced Auditing
ACC 473/573	Advanced Income tax Accounting
ACC 492/592	Accounting Information Systems

### Courses in Major Field: Management

The courses listed below are required of all management majors. Students with a master's degree in a business-related area, but not an MBA degree, must successfully complete the graduate business core or its equivalent before starting the doctoral curriculum. The student's faculty advisor will determine the number and name of the courses to be completed during the first semester of enrollment. Students will be awarded the Ph.D. degree after successful completion of the doctoral curriculum and all other University requirements. Additionally, students with a non-business-related master's degree must follow the special note for applicants without an MBA.

Course	Course Title	Semester Hours
MNGT 721	Advanced Organizational Behavior	3
MNGT 722	Seminar in Decision Support Systems	3
MNGT 723	Seminar in Strategic Management	3
MNGT 724	Advanced International Management Strategy	3
MNGT 725	Seminar in Organizational Change	3
MNGT 726	Seminar in Organizational Strategy and Decision Making	3
MNGT 727	Seminar in Special Topics	3

### Dissertation Requirement

MNGT 799	Ph.D. Dissertation Research in Management	3
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(Course may be repeated; a minimum of 21 credit hours is required)

**Note-** The following courses are considered prerequisites for Ph.D. level management courses. Most must be completed prior to enrollment in 500-level graduate courses and all must be completed prior to enrollment in 700-level Ph.D. courses. Consult your faculty advisor for additional details.

Course	Course Title
MNGT 330	Management to Organizations
MNGT 333	Quantitative Business Analysis
MNGT 416	Organizational Behavior
MNGT 460	Management Information Systems
MNGT 462	International Business
MNGT 502	Human Resource and Organizational Behavior

**Courses in Major Field: Economics**

The courses listed below are required of all economics majors. Students with a master’s degree in a business-related subject, but not an MBA degree, must successfully complete the graduate business core or its equivalent before starting the doctoral curriculum. The student’s advisor will determine the number and name of the courses to be completed during the first semester of enrollment. Students will be awarded the Ph.D. degree after successful completion of the doctoral curriculum and all other University requirements. Additionally, students with a non-business-related master’s degree must follow the special note for applicants without an MBA.

Course	Course Title	Semester Hours
ECO 711	Advanced Macroeconomic Theory	3
ECO 712	Advanced Microeconomic Theory	3
ECO 716	History of Economic Thought	3
ECO 730	Managerial Economics	3
ECO 746	Seminar in International Trade and Finance	3
ECO 725	Methods of Urban and Regional Analysis and Planning	3
ECO 735	Seminar in Economics of Housing And Urban Transportation	3
ECO 713	Monetary and Fiscal Policy Analysis	3

**Dissertation Requirement**

ECO 799 Ph.D. Dissertation Research in Economics 3  
(Course may be repeated; a minimum of 21 credit hours is required)

**Note**--The following courses are considered prerequisites for Ph.D. level economics courses. Most must be completed prior to enrollment in 500-level graduate courses and all must be completed prior to enrollment in 700-level courses. Consult your faculty advisor for additional details.

Course Number	Course Title
ECO 211	Principles of Macroeconomics
ECO 212	Principles of Microeconomics
ECO 311	Intermediate Macroeconomics
ECO 312	Intermediate Microeconomics
ECO 357	Business Statistics I
ECO 358	Business Statistics II
ECO 442	Money and Banking
ECO 416	History of Economic Thought

**Supporting Field Requirement**

All students are required to select a supporting area, preferably in the School of Business, and complete six (6) to nine (9) “doctoral-level” credit hours in that area. The selection and the design of the supporting curriculum must be done in consultation with the faculty advisor, as part of the development of the student’s comprehensive plan of study.

**A Special Note to Applicants Without an MBA**

Doctoral applicants with a master’s degree other than the MBA must complete the graduate business core courses listed earlier and earn an average grade of at least “B”. Students whose master’s degree and undergraduate degree are in a non-business related area must satisfy a list of undergraduate prerequisites following consultation with the academic advisor. A grade of at least “B” must be earned in those undergraduate prerequisites to meet the admission requirements of the program. Students with an undergraduate degree in business but with a non-business related graduate degree will be required to complete the graduate business core and show evidence of having satisfied the undergraduate prerequisites.

**Suggested Undergraduate Prerequisites**

Course Title	Hours
Principles of Financial Accounting	3
Principles of Macroeconomics	3
Principles of Microeconomics	3
Business Finance	3
Management to Organizations	3
Business Statistics I	3
Business Statistics II	3
Marketing Management	3
Business Calculus	3

After satisfactorily completing all prerequisite requirements and the graduate business core, students without the MBA will follow the actual doctoral program of study.

**Suggested Curriculum Sequence**

**Major Concentration: Accounting**

Course	Title	Semester	Hours
<b>First Year</b>			
ACC XXX	Accounting or Bus. Elective	Fall	3
ACC XXX	Accounting or Bus. Elective	Fall	3
MNGT 710	Advanced Statistical Methods I	Fall	3
ACC 583	International Accounting	Spring	3
MNGT 711	Advanced Statistical Methods II	Spring	3
Elective	Supporting Field Elective	Spring	3
BEAS 790	Teaching Methods in Business	Spring	3
<b>Second Year</b>			
ACC 790	Seminar in Accounting Education	Fall	3
ACC 791	Seminar in Accounting Research	Fall	3
MNGT 712	Applied Multivariate Analysis	Fall	3
ACC 792	Seminar in Accounting		

	Research Methods II	Spring	3
Elective	Supporting Field Elective	Spring	3
MNGT 714	Research Methods	Spring	3

After satisfactory completion of the aforementioned coursework and the required doctoral comprehensive examinations, the student is required to complete twenty-one (21) hours of dissertation research (ACC-799).

#### Major Concentration: Management

Course	Title	Semester	Hours
<b>First Year</b>			
MNGT 721	Advanced Organizational Behavior	Fall	3
MNGT 722	Seminar in Decision Support Systems	Fall	3
MNGT 710	Advanced Statistical Methods I	Fall	3
MNGT 711	Advanced Statistical Methods II	Spring	3
MNGT 723	Seminar in Strategic Management	Spring	3
MNGT 724	Advanced International Management	Spring	3
BEAS 790	Teaching Methods in Business	Spring	3
<b>Second Year</b>			
MNGT 712	Applied Multivariate Analysis	Fall	3
MNGT 725	Seminar in Organizational Change	Fall	3
Elective	Supporting Field Elective	Fall	3
MNGT 726	Seminar in Organizational Strategy and Decision Making	Spring	3
Elective	Supporting Field Service	Spring	3
MNGT 714	Research Methods	Spring	3
MNGT 727	Seminar in Special Topics	Spring	3

After satisfactory completion of the aforementioned coursework and the required doctoral comprehensive examinations, the student is required to complete twenty-one (21) hours of dissertation research (MNGT-799).

#### Major Concentration: Economics

Course	Title	Semester	Hours
<b>Second Year</b>			
ECO 762	Advanced Econometrics	Fall	3
ECO 725	Methods of Urban and Regional Analysis	Fall	3
ECO 730	Managerial Economics	Fall	3
Elective	Supporting Field Elective	Fall	3
ECO 735	Seminar in Economics of Housing & Urban Transp.	Spring	3
ECO 746	Seminar in International Trade and Finance	Spring	3
MNGT 714	Research Methods	Spring	3
ECO 713	Advanced Monetary and Fiscal Analysis	Spring	3

After satisfactory completion of the aforementioned coursework and the required doctoral comprehensive examinations, the student is required to complete twenty-one (21) hours of dissertation research (ECO-799).

#### Phase III: Comprehensive Examinations

Each doctoral student is required to take written comprehensive examinations in the major field. The exams will be given to test the student's competency in the field of interest. A student who wishes to sit for the comprehensive examinations must complete the necessary application by the application deadline with the office of the program director. The application must be submitted to the Graduate Dean for approval. Once the application is approved, the student is expected to report on the date of the examination. A student who wishes to withdraw from the examination must submit a formal petition of withdrawal one week prior to the first exam day. Failure to report for the examinations, or any part thereof, without a documented excuse, will constitute a forfeit of the examination and will result in a failing grade.

#### Student Eligibility

A student must be enrolled, and in good standing, at the time of application for the examinations, and during the semester in which the exams are taken. The examinations will be given after the student completes all coursework in the major. Specifically, to be eligible for the examinations, a student must earn a cumulative grade point average of 3.0 on a four-point scale, and must earn at least a "B" in every doctoral course completed. In addition, students with outstanding incomplete ("I") grades will not be eligible to take the examinations.

#### Schedule of the Examinations and Role of the Faculty

The examinations will be scheduled in the fall, spring semester, and in the summer (if departmental resources permit). The office of the director of the Ph.D. program will publish the specific examination dates in Business. The exams will be prepared, administered, and graded by members of the graduate faculty from the student's major. The examinations will be graded using the pass-fail method. Students will be notified of the results, in writing, within three weeks of the last examination day.

#### Student's Right to Repeat the Examinations

In case of failure, a student is given one additional opportunity to sit for the examinations. The second attempt must take place within a year of the first examination. Students who do not attempt to repeat the examinations, or any failed part, within one year will forfeit their opportunity. Students who fail the comprehensive examination, or any portion thereof, two times normally will be dismissed from the program.

#### Students Right to Petition for a Third Examination

After two failures of the entire examination, or any part thereof, a student may petition in writing for a third attempt. The third attempt will be extended at the discretion of the graduate faculty of the student's area of specialization and the Dean of the College of Business. That is, the exam committee of the student's department must first approve the appeal. Following the approval of the departmental committee, an appeal will be presented to the dean on behalf of the student. If granted an approval, the student will be extended the privilege of a third

examination. Students failing the comprehensive examinations, or any portion thereof, three times will be dismissed from the program.

### **Candidacy Status**

Students will be certified by the Dean of the College of Business for admission to candidacy for the Ph. D. degree upon the recommendation of the Director of the Doctoral Program after satisfactory completion of the following:

1. All course requirements in major and supporting areas;
2. Earning a passing score on written and oral examinations;
3. Approval of a dissertation proposal by the Dissertation Committee.

### **Phase IV: The Dissertation Process**

An important requirement of the Ph.D. degree is the successful completion of the doctoral dissertation. The dissertation research component requires the completion of 21 credit hours aimed at implementing the skills and knowledge base acquired during the completion of the research core and the courses in the field of specialization. The dissertation must be a definite scholarly contribution related to the field of business, and must demonstrate the candidate's ability to conduct effective independent research. Students are expected to demonstrate extensive skills in model building, collecting and analyzing data, and developing a quality manuscript as required for the degree. The student, in consultation with the dissertation advisor, determines the number of dissertation hours taken each semester. After successful defense of the dissertation, a final grade will be assigned for the dissertation hours.

The dissertation process includes the following steps:

1. Selection of a dissertation topic;
2. Selection of a dissertation committee;
3. Development and defense of the dissertation proposal;
4. Certification of the proposal; and
5. Development and defense of the completed dissertation.

After completion of steps 1, 2 and 3 above, a student is eligible for admission to candidacy.

### **Dissertation Committee**

After satisfactory completion of the comprehensive examinations, the doctoral student must immediately initiate the process of forming a dissertation committee to advise him/her during the process of conducting the dissertation research and developing the dissertation manuscript. The student is advised to select a faculty member from his/her area of concentration to serve as mentor or chair of the committee. With the assistance of the committee chair and in coordination with the department chair, the committee will be formed. The committee should be in place within sixty (60) days of the announcement of the results of the comprehensive examinations.

The Committee shall consist of five members:

1. Three members from the student's department, one of which will serve as committee chair one of which will serve as committee chair.
2. One member with a proven quantitative background,
3. One at-large member to be selected by the student in consultation with the chair of the committee.

The primary role of the committee is to advise the student through the dissertation process and to evaluate the proposal and the actual dissertation for quality assurance. Upon satisfactory completion of the dissertation requirement, the committee chair will assign the final grades for the dissertation credit hours.

Note: All faculty members with membership on the Graduate Faculty are eligible to serve on dissertation committees. The names of those individuals are usually listed in the university's graduate catalogue.

### **Development and Defense of the Dissertation Proposal**

After completion of the required coursework in the major and supporting areas, the student must select a dissertation topic and develop a dissertation proposal with the assistance of the Dissertation Committee. The proposal must be presented to the Dissertation Committee and defended through an oral examination, open to the faculty and to other graduate students. The student must successfully defend the dissertation proposal within one year after completing the comprehensive examinations.

### **Certification of the Dissertation Proposal**

Following a successful defense of the dissertation proposal, doctoral degree candidates must submit, within sixty (60) days, a corrected copy of the proposal to the Dissertation Committee for final approval of the project. The proposal will be submitted to the department chair, the director of the doctoral program, and the Dean. The University's Institutional Review Board (IRB) must approve the proposal whenever human subjects are proposed to be used in the dissertation research.

### **Defense of the Completed Dissertation**

Each student is required to take an oral defense of the completed dissertation. The Dissertation Committee, led by the student's dissertation advisor, administers the examination. The dissertation defense must be held by the first Monday in March for prospective May graduates and by the first Monday in June for prospective summer graduates. The examination will be graded using the pass-fail method.

A candidate who fails the oral defense of the dissertation will be given an opportunity to make the necessary corrections and reschedule the defense during the next academic semester. Candidates who fail the dissertation defense two times normally will be dismissed from the program. After two failures, a candidate may petition in writing for a third attempt. The third attempt will be at the discretion of the graduate faculty of the student's area of specialization. Candidates failing the defense of the dissertation three times will be dismissed from the program.

### **Awarding a Masters' Degree (MBA or MPA) to Doctoral Candidates**

Periodically, the program admits students with a masters' degree outside of the field of business. Those students, upon matriculation, must complete the graduate business core requirements before enrolling in the typical doctoral curriculum. An option is hereby extended to those students to apply for an MBA following the completion of an additional six credit hours beyond the graduate business core (24 credit hours). The MBA advisor, to ensure completion of the typical MBA requirements, must evaluate the transcripts of the students. During the semester of application for the MBA degree, the student must enroll as a Master student to be processed for the MBA degree. Following completion and award of the MBA, the student will be permitted to re-enlist in the doctoral program to complete the requirements for the Ph.D. degree. Doctoral students who wish to apply for an MPA must satisfy the MPA core in addition to the graduate business core.

### **Second Doctoral Concentration**

Students may exercise the option of pursuing a second concentration after completion of the original plan of study. A student who wishes to pursue a second concentration must satisfy the following:

1. Submit an application for admissions to the Division of Graduate Studies and Business Doctoral Program for the second concentration;
2. Submit three letters of recommendation from program professors to the Business Doctoral Program;
3. Submit a personal statement explaining the added value of the second concentration to his/her professional and intellectual development.

If admitted, the student shall be permitted to transfer all relevant courses completed during the first concentration. Additionally, the student must successfully:

1. Complete the research core requirements for the second concentration, if applicable;
2. Complete all relevant departmental coursework in the second concentration;
3. Complete the comprehensive examinations and the dissertation requirement of the second concentration (21 hours).

## **DESCRIPTION OF COURSES**

### **Research Core**

**Prerequisites:** Students must show evidence of having satisfactorily completed a course in Calculus and Matrix Algebra prior to starting Statistics courses in the Research Core.

#### **MNGT 710 Advanced Statistical Methods I. (3 hours)**

**Prerequisite:** MNGT 516 or equivalent. This course offers a thorough coverage of univariate statistical inference. Topics include simple regression, analysis of variance, multiple regression and correlation, and moving average time-series models.

#### **MNGT 711 Advanced Statistical Methods II. (3 hours)**

**Prerequisite:** MNGT 710 or equivalent. This course offers a continuation of MNGT-710. Topics to be covered include concepts and techniques of non-parametric statistics, advanced topics in regression, time series analysis, autocorrelation, autoregressive moving average models, identification, fitting and forecasting.

#### **MNGT 712 Applied Multivariate Analysis. (3 hours)**

**Prerequisite:** MNGT 710 or equivalent. This course offers the doctoral students a thorough analysis of the theory and applications of multivariate methods. Topics to be covered include matrix algebra, factor analysis, canonical correlation, discriminant analysis and multivariate analysis of variance.

**MNGT 714 Research Methods. (3 hours)** This course focuses on social and behavioral research methods to explore business and organizational problems. The course provides the student with theory, research, and techniques associated with the investigation of specific research problems in functional areas of business.

### **Management**

#### **MNGT 721 Advanced Organizational Behavior. (3 hours)**

This course offers alternative theoretical approaches useful for analyzing organizational environment and intra-organizational relations. The course emphasizes understanding of macro-organizational behavior concepts and empirical research related to design, structure, and functioning of organizations.

#### **MNGT 722 Advanced Decision Support Systems. (3 hours)**

This course offers an analysis of techniques involved in the development of computer-based systems designed to help managers in decision-making and problem solving processes. Topics include assessment of technology available, discussion of the design and implementation of such systems.

#### **MNGT 723 Seminar in Strategic Management. (3 hours)**

This course offers special topics dealing with important issues in strategic management. The course emphasizes global and technological perspectives of strategic management issues.

#### **MNGT 724 Advanced International Management. (3 hours)**

This course offers an in-depth study of problems of operating across multiple political and cultural boundaries. Topics include theory and practice of the international business, global competition, organizing for global operations, market entry, innovations, and comparative management.

#### **MNGT 725 Seminar in Organizational Change. (3 hours)**

This course focuses on the human aspects of problems arising in technical, social, and organizational arenas faced with the need to change. The course includes detailed analyses of organizations as systems, organizational leadership and change.



**MNGT 726 Seminar in Organizational Strategy and Decision Making.** (3 hours) This course offers an overview of the theory and research in strategic management with a scholarly research orientation on issues of both strategic content and process. The empirical study of these issues is emphasized.

**MNGT 727 Seminar in Special Topics.** (3 hours) This course offers discussions of special topics dealing with important issues pertaining to efficient management of organizations. Issues dealing with production and inventory management, and the development of leadership skills are to be addressed. Specific topics are to be selected by the instructor and may vary each semester.

**MNGT 799 Ph.D. Dissertation Research in Management.** Students will complete doctoral level research, which must culminate in the successful development and defense of the dissertation in the field of Management. Students may register for more than one section in a given semester. A minimum of 21 credit hours of Ph.D. Dissertation is required. Prerequisite: Consent of the chair of the Dissertation Committee.

### Economics

**ECO 700 Environmental Economics.** (3 Hours) This course is concerned with a theoretical framework for the analysis of environmental problems, including concepts of market failure and externalities, materials balance and property rights. The policy implications of this analytical model are explored for a range of topics including pollution and the preservation of natural environmental species. It also explores the effects of economic growth on the environment to include the interrelationships between the economics activity and the environment. Cost benefit analysis, and the application of the economic theory of external economies and diseconomies and welfare economics is applied to Problems of the physical and socioeconomic environment.

**ECO 711 Advanced Macroeconomic Theory.** (3 hours) This course offers an analysis of static and dynamic theories of income, employment, and the price level. Other topics include analysis of real and monetary influences on economic growth, theories of investment and consumption, money demand, and stabilization theory and policy.

**ECO 712 Advanced Microeconomic Theory.** (3 hours) This course offers an advanced analysis of microeconomic theory. Topics include consumer and producer behavior and determination of market prices, resource markets analysis, analysis of game theory, theories of uncertainty, general equilibrium, and welfare economics.

**ECO 713 Advanced Monetary and Fiscal Policy Analysis.** (3 hours) This course offers a comprehensive study of various aspects of monetary theory and fiscal economics, as well as the development and implementation of monetary and fiscal policies and their implications for economic growth and stability.

**ECO 716 History of Economic Thought.** (3 hours) This course offers a review and analysis of major theories and current economic philosophy. Topics of coverage include the study of the contributions of the classical school, the marginalists, the neo-classicists, the institutionalist, the keynesians, the neo-keynesians, the modern school, and the new classical school.

**ECO 725 Methods of Urban and Regional Analysis and Planning.** (3 hours) This course offers an analysis of the

theory of urban and regional development and growth; economic analysis of urban problems and their solutions, analysis of land use, transportation, industrial development and urban planning models.

**ECO 730 Managerial Economics.** (3 hours) This course offers an analysis of microeconomic theory as it applies to business operations. Topics include demand theory and estimation; production and cost theories and estimations, capital budgeting theory and analysis, pricing policies, and production under uncertainty.

**ECO 735 Seminar in Economics of Housing and Urban Transportation.** (3 hours) This course offers an analysis of selected problems of contemporary cities in housing, transportation and industrial development. Topics include analysis of costs and benefits of housing programs, distribution and use of transportation facilities and services, and analysis of economic implication of public policy initiatives pertaining to urban transportation.

**ECO 746 Seminar in International Trade and Finance.** (3 hours) This course offers an analysis of theory and practice of international trade and finance. Topics of discussion include advantages and disadvantages of foreign trade, analysis of effects of tariffs and other restrictions on the flow of trade, and analysis of international commercial and monetary policies between countries.

**ECO 760 Econometrics.** (3 hours) This course offers exposure to the fundamental elements of economic modeling, construction, estimation and testing. It will cover; simple and multiple regression analysis, use of dummy variables, testing for multicollinearity, autocorrelation, heteroscedasticity, etc... Extensive use of statistical software is required

**ECO 762 Advanced Econometrics.** (3 hours) This course offers a continuation of Econometrics (ECO 760). Topics of discussion include multicollinearity, autoregressive and distributive lag models, autocorrelation problems and their correction, measurement errors problems, simultaneous equations models, identification problems, etc.. Extensive use of statistical software is required.

**ECO 799 Ph.D. Dissertation Research in Economics.** Students will complete doctoral level research, which must culminate in the successful development and defense of the dissertation in the field of Economics. Students may register for more than one section in a given semester. A minimum of 21 credit hours of Ph.D. Dissertation is required. Prerequisite: Consent of the chair of the Dissertation Committee.

### Teaching Methodology Course

**BEAS 790 Teaching Methods in Business.** (3 hours) This course offers the student an introduction to the principles and philosophy of teaching. Selected topics include concepts and techniques relating to various instructional strategies used by colleges and university teachers, and the development of media-based courses for web courses and distance learning instruction.

### Accounting

**ACC 790 Seminar in Accounting Education.** (3 hours) This course introduces the students to contemporary issues in accounting education and accounting education research.

**ACC 791 Seminar in Accounting Research Methodology I.** (3 hours) This course offers a study of the application of contemporary research methodology to selected subject areas

in accounting including financial accounting and managerial accounting.

**ACC 792 Seminar in Accounting Research Methodology II.** (3 hours) This course offers a continuation of ACC 791 with a focus of the application of contemporary research methodology to auditing and other accounting areas not covered in ACC-791.

**ACC 799 Ph.D. Dissertation Research in Accounting.** Students will complete doctoral level research, which must culminate in the successful development and defense of the dissertation in the field of Management. Students may register for more than one section in a given semester. A minimum of 21 credit hours of Ph.D. Dissertation is required. Prerequisite: Consent of the chair of the Dissertation Committee.

# COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT

**Dr. Daniel Watkins, Dean**

**Dr. Millard J. Bingham, Interim Associate Dean**  
**Dr. Locord Wilson, Interim Associate Dean**

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## Departments:

- ❶ Counseling, Rehabilitation and Psychometric Services
- ❶ Educational Administration, Foundations and Leadership
- ❶ Educational, Multicultural and Exceptional Studies
- ❶ Elementary and Early Childhood Education
- ❶ Executive Ph.D. in Urban Higher Education
- ❶ Health, Physical Education, and Recreation

The College of Education and Human Development has as its primary purpose and responsibility the development, administration, supervision and evaluation of programs in teacher education and other related human services which support the teaching profession and the mission of the University. It offers programs of professional training in non-teaching areas such as counseling, rehabilitative services and recreation leadership. More specifically, the College of Education and Human Development is responsible for developing and administering quality, comprehensive, career-oriented programs which attract culturally and economically diverse students into the fields of early childhood education, elementary education, secondary education health and physical education, recreation, special education, educational administration and supervision and guidance and counseling. Further, the College of Education and Human Development: (1) emphasizes inquiry, research, and publication; (2) promotes faculty, staff, and student development programs; (3) provides ongoing programs for the education community, and promotes cooperation and collaboration between the College of Education and Human Development and other education/human service agencies at the local, state, national and international levels; and (4) searches for outside assistance to aid in the support of its program offerings.

## Mission

The Mission of the College of Education and Human Development at Jackson State University is to provide academic and professional training in the areas of teacher preparation, health/recreation-physical education, counseling/psychometry, Pre-K to 12 leadership and higher education.

## Vision

The College of Education and Human Development at Jackson State University aspires to be one of the top five educational programs in the country. As responsive educators with adaptive expertise, the college will provide exceptional leadership in research and professional practice that will have a global impact on the lives of diverse students from pre to post graduate education.

## Conceptual Framework: The Responsive Educator

The College of Education and Human Development (COEHD) provides learning opportunities designed to produce the "Responsive Educator," a completer who demonstrates excellence in learning and leadership. To this end, the COEHD is guided by the Responsive Educator Framework (REF), a conceptual framework that embodies four outcomes that are applicable to all of its faculty, candidates (students), schools, departments, and programs. With reference to its candidates and completers, a "Responsive Educator" is one who provides and embodies

- ❶ A Committed Response
- ❶ A Knowledgeable Response
- ❶ A Skillful Response
- ❶ A Professional Response

The **Knowledgeable Response** means demonstrating well-informed, discerning acquaintance with the critically important information and understanding of the teaching profession, field(s) of study, and pedagogy that is necessary to act with decisive and effective purposefulness in the best interests of all students.

The **Skillful Response** means demonstrating the teaching-related abilities, pedagogical and diversity proficiencies that are required to support positive outcomes for all students in educational settings.

The **Committed Response** means being ethically and professionally obligated, pledged and disposed to uphold both a professional and personal affirmation of equity pedagogy - the belief in fairness as fundamental to the educational enterprise, and the conviction that all students can learn.

The **Professional Response** means showing oneself to be a skilled education practitioner who is knowledgeable about schooling and education, well-versed in the standards, ethics, policies, and responsibilities incumbent upon the teaching profession, and both skilled and committed to advocacy that strengthens both the profession and the learning environment it serves.

The overall educational goal of the COEHD is to ensure that its candidates and completers are eminently qualified to:

- ❶ *Demonstrate leadership*
- ❷ *Foster learning*
- ❸ *Facilitate collaboration*
- ❹ *Nurture diversity*
- ❺ *Integrate technology*
- ❻ *Implement accountability systems*
- ❼ *Develop instruction*
- ❽ *Advocate wellness*

#### **Organization**

The College of Education and Human Development consists of the following departments and units: Counseling, Rehabilitation and Psychometric Services; Elementary and Early Childhood Education; Educational Leadership; Lifelong Learning; Health, Physical Education and Recreation; Special Education; and the Office of Professional and Field-Based Services.

#### **Accreditation**

The College of Education and Human Development is CAEP (Council of Accreditation of Educator Preparation) accredited. All professional education programs are approved by the Mississippi State Department of Education. The College also holds membership in the American Association of Colleges for Teacher Education. The professional education curriculum reflects the requirements of the Mississippi Commission on Educational Licensure.

#### **Professional Education Council**

The professional education programs at Jackson State University are organized, unified, and coordinated by the Professional Education Council which consists of graduate and undergraduate student representatives, university faculty both within and external to the College of Education, representatives from the University's Graduate Council, Curriculum Committee

and Undergraduate Studies/CyberLearning, practicing professionals, the Director of Teacher Education, and the Dean of the College of Education. The Professional Education Council forms the governance system for the unit. Its major functions are to: (1) define the professional education program consistent with the overall mission of the University; (2) establish and approve policies governing the design, development, implementation, and evaluation of initial and advanced programs in professional education; (3) approve the admission process for students applying to professional education programs; (4) identify and recommend instructional and laboratory experiences in relationship to the teacher-preparation model, state licensure standards, and the recommendations of specialized professional associations; and (5) serve as a monitoring unit for the quality of program activities, operations, and student outcomes. The Dean and Associate Deans of the College of Education serve as Chairperson and Co-Chairpersons, respectively. As an instructional committee, the Professional Education Council reports to the Vice President for Academic Affairs.

#### **Student Support Services Center**

In addition to the assignment of program advisors, the College of Education and Human Development students are provided a general advising center where initial or temporary advisement is provided, problem-solving and counseling assistance is available as well as information regarding academic activities. The Center manages the student appeals process for those who feel aggrieved in their relationship with the College, its policies, practices, procedures or its faculty and staff.

#### **Lottie W. Thornton Early Childhood Laboratory Center**

The Early Childhood Laboratory Center provides childcare services for faculty, students, and the general community and serves a multipurpose in the area of teacher education. It offers diversified clinical experiences for graduate and undergraduate students in cognitive, psychomotor and the social development of young children. It supports the curriculum and research efforts of university students and faculty.

#### **Professional Test Preparation Clinic**

The Professional Test Preparation Clinic, a computerized facility, is designed to facilitate the College of Education's efforts to improve the performance of undergraduate and graduate students on standardized tests. General testing strategies, thinking, reading and listening skills are emphasized.

#### **Cleopatra D. Thompson Curriculum Center**

The Center provides a variety of multimedia resources to support the objectives of the College of Education and houses the Professional Educators Production Center that also aids graduates during their induction year as well as a wealth of professional and instructional materials and related equipment for faculty and students. The Center serves the objectives of programs in the College by locating, collecting, organizing,

promoting, and distributing learning resources for use by faculty and students as individuals and groups. It provides leadership in the utilization, experimentation, and evaluation of the best possible arrangements of materials for teaching and learning; makes facilities, services, and equipment necessary for the selection and utilization of learning resources available; and provides facilities for assistance in the production of instructional materials, displays and demonstrations.

**J. H. Jackson Endowed Chair in Education**

The Joseph H. Jackson Endowed Chair in Education was established in 1987 by a \$200,000 gift from Dr. Jackson toward the \$500,000 chair. This is the first endowed chair to be established in the history of the University, and it is named for one of the University's most distinguished alumni. The interest funds generated from the endowment will enable JSU to attract outstanding faculty members in the area of education and will provide them with the resources to pursue quality teaching and research.

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**THE CENTER FOR TEACHER QUALITY**

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Telephone: (601) 979-2335

The Center for Teacher Quality provides supportive services in teacher education. The program is a structured, real-world praxis in the delivery of required clinical and field-based experiences at both the initial and advanced levels. Thus, all internships, field, clinical and student teaching experiences are under the auspices of this office.

The office is also responsible for the evaluation of transcripts of applicants seeking educator licensure. Supervised student teaching is required for teacher certification by the state of Mississippi and most other states. Requirements for licensure may be obtained through this office.

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**DEPARTMENT OF COUNSELING,  
REHABILITATION AND PSYCHOMETRIC  
SERVICES**

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Dr. Dion Porter, Associate Professor and Chair  
P. O. Box 17122  
Telephone: (601) 979-2361/(601) 979-3364  
Fax: (601) 979-3368  
E-mail: dion.porter@jsums.edu

**Faculty**

Dr. R. Arnold Branson, Associate Professor  
Dr. G. Dansby-Giles, Professor  
Dr. R. Fults-McMurtery, Associate Professor  
Dr. F. Giles, Professor  
Dr. P. Green, Assistant Professor  
Dr. C. Harris, Assistant Professor  
Dr. Al Haralson, Assistant Professor  
Dr. L. Johnson, Associate Professor  
Dr. D. Porter, Associate Professor  
Dr. N. Yazdani, Assistant Professor

**Accreditation**

Counseling, Rehabilitation and Psychometric Services programs are housed within the College of Education and Human Development, School of Administrative Leadership, which is accredited by the Council of Accreditation of Educator Preparation (CAEP). The Clinical Mental Health, School and Rehabilitation Counseling Programs are accredited by the Council for Accreditation of Counseling and Related Educational Programs (CACREP).

**Program Objectives**

In support of its mission, the department prepares masters and specialist level students for careers in professional counseling. The specific objectives of the department are to prepare students to:

1. Acquire the professional skills necessary to become professional counselors,
  2. Obtain certification in school counseling or school psychometry, and
  3. Upgrade their certification and/or skill level in counseling.
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**Counseling  
Master of Science and  
Master of Science in Education**

**Admission Requirements**

Applicants must be admitted to both the Division of Graduate Studies and the Counseling Program. The Counseling Program has the following admission requirements in addition to the Division of Graduate Studies requirements.

1. A minimum cumulative GPA of 3.00 for regular admission and 2.80 for conditional admission, at the undergraduate level.
2. Interview and a writing sample.
3. Three letters of recommendation.
4. **Applications will be accepted for Spring, Fall or Summer enrollment.**
5. Successful applicants for the M.S. Ed. program must be certified at the 'A' level or above in a teaching discipline.

**Degree Requirements**

To qualify for a Masters' degree in the department, a student must complete 51 to 60 semester hours with a cumulative GPA of 3.00 or above and obtain a passing score on the Graduate Comprehensive Examination.

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<b>Master of Science in Education School Counseling Concentration</b>		
<b>Course</b>	<b>Title</b>	<b>Hours</b>
EDFL 514	Elementary Statistics	3
EDFL 515	Methods of Educational Research	3
EDFL 568	Curriculum Methods	3
	<b>Hours</b>	<b>9</b>
COUN 506	Introduction to Professional Counseling	3
COUN 510	Organization and Administration of Guidance	3
COUN 514	Counseling Assessment and Evaluation	3

COUN 514	Analysis of the Individual	3
COUN 517	Lifestyles and Career Development	3
COUN 520	Techniques of Counseling	3
COUN 522	Counseling Children	3
COUN 526	Dynamics of Group Process	3
COUN 561	Psychological Aspects of Human Growth and Development	3
COUN 571	Counseling Skills	3
	<u>Supervised Experience</u>	
COUN 658	Marriage and Family Counseling	3
COUN 611	Psychodiagnosis and Treatment	3
COUN 631	Social and Cultural Foundations of Counseling	3
COUN 671	Practicum in Supervised Experience and Consultation	3
COUN 691	Seminar in Legal and Ethical Issues	3
COUN 678	Internship in Counseling	3
	<u>6</u> (600 clock hours)	<u>3</u>
		<b>60</b>

**Total Hours**

**NOTE:** Students are required to complete COUN 506, 510, 514, 517, 520, 522, 526, 561, 571, 578, 631, 691 and 671 before enrolling in internship. Students should apply for Internship at the beginning of the semester prior to the intended enrollment semester.

Please see Curriculum Sheet for Recommended Electives.

This program is accredited by the Council for Accreditation of Counseling and Related Educational Programs (CACREP).

**Master of Science  
Clinical Mental Health Counseling Concentration**

<b>Core Course</b>	<b>Title</b>	<b>Hours</b>
EDFL 514	Elementary Statistics	3
EDFL 515	Methods of Educational Research, <i>or</i>	
COUN 585	Research in Guidance and Counseling	3
	<b>Hours</b>	<b>6</b>
<b>Required Concentration</b>		
COUN 504	Clinical Mental Health Counseling	<u>3</u>
COUN 506	Introduction to Professional Counseling	3

COUN 514	Counseling Assessment and Evaluation	3
COUN 514	Counseling Assessment and Evaluation	3
COUN 517	Lifestyles and Career Development	3
COUN 520	Counseling Theories	3
COUN 526	Dynamics of Group Process	3
COUN 561	Psychological Aspects of Human Growth and Development	3
COUN 571	Theories of the Helping Relationship	3
COUN 571	Theories of Helping Relationship	3
COUN 611	Psychodiagnosis and Treatment	3
COUN 631	Social and Cultural Foundations of Counseling	3
COUN 658	Marriage and Family Counseling	3
COUN 671	Practicum in Supervised Experience and Consultation	3
COUN 691	Seminar in Legal and Ethical Issues	3
<b>Internship</b>	(9 Hours Total)	
COUN 578	Internship in Counseling	6
	<u>6</u> (600 clock hours)	<u>9</u>
<b>Electives</b>		<b>6</b>
		<b>60</b>

**Total Hours**

**NOTE:** Students are required to complete COUN 504, 506, 514, 517, 520, 526, 561, 571, 611, 631, 658, 671 and 691 before enrolling in internship. Students should apply for Internship at the beginning of the semester prior to the intended enrollment semester.

This program is accredited by the Council for Accreditation of Counseling and Related Educational Programs (CACREP).

**Specialist in Education  
School Counseling Concentration  
(Requires AA Teacher Certification)**

Students applying for admission to the Specialist program must obtain general admission to the Division of Graduate Studies; however, this does not guarantee admission to the College of Education Specialist program in the specific area of concentration. Students must also complete an application to the specific department.

**Admission Requirements**

- A master's degree from an accredited college or university
- An overall GPA of 3.0 or above (on a 4.0 scale) on the master's degree
- A completed Specialist program application

- Three letters of recommendation
- Acceptable evidence of the applicant's writing ability as determined by a writing sample completed under the supervision of the screening committee
- A successful interview with the program screening committee
- A recommendation for admission by the screening committee
- Student must hold a valid teaching license
- Deadline for applications for summer/fall admissions is March 15th

**Degree Requirements**

Students are required to complete 42 semester hours, write a thesis, and obtain a passing score on the Graduate Comprehensive Examination. Students are encouraged to enroll in COUN 687: Advanced Research and Independent Study.

**Educational Core Requirements**

Course	Title	Hours
EDFL 601	Advanced Research and Statistics	3
EDFL 602	Comparative Education, <i>or</i>	
EDFL 610	School and Community Relations	3
<b>Hours</b>		<b>6</b>

**Counseling Core Requirements**

COUN 506	Introduction to Professional Counseling	3
COUN 510	Organization and Administration of Guidance	3
COUN 514	Counseling Assessment and Evaluation	3
COUN 514	Counseling Assessment and Evaluation	3
COUN 517	Lifestyles and Career Development	3
COUN 520	Principles and Techniques of Counseling	3
COUN 526	Dynamics of Group Process	3
COUN 561	Psychological Aspects of Human Growth and Development	3
COUN 571	Theories of the Helping Relationship	3
COUN 571	Theories of Helping Relationship	3
COUN 631	Social and Cultural Foundations of Counseling	3
COUN 671	Practicum in Supervised Experience and Consult	3
COUN 691	Seminar in Legal and Ethical Issues	3
<b>Hours</b>		<b>39</b>

**Internship Requirement**

COUN 675	Internship in School Counseling	6
<b>Total Hours</b>		<b>45</b>

(For Students holding AA certification in Counseling)

**Educational Core Requirements** 6

**Counseling Core Requirements**

COUN 522	Counseling Children	3
COUN 675	Internship in School Counseling	3
COUN 676	Counselor Supervision and Theories	3
COUN 687	Advanced Research and Independent Study	3
<b>Hours</b>		<b>18</b>

**Concentration Core**

Approved Counseling Electives	15
<b>Total Hours</b>	<b>33</b>

*Note:* Students are required to complete COUN 506, 510, 514, 517, 520, 526, 561, 631, 671 and 691 before enrolling in internship. Students should apply for internship at the beginning of the semester prior to the intended enrollment semester.

**Specialist Degree in Education  
Psychometry Concentration**

Students applying for admission to the Specialist program must obtain general admission to the Division of Graduate Studies; however, this does not guarantee admission to the College of Education Specialist program in the specific area of concentration. Students must also complete an application to the specific department.

**Admission Requirements**

- A master's degree from an accredited college or university
- An overall GPA of 3.0 or above (on a 4.0 scale) on the master's degree
- A completed Specialist program application
- Three letters of recommendation
- Acceptable evidence of the applicant's writing ability as determined by a writing sample completed under the supervision of the screening committee
- A successful interview with the program screening committee
- A recommendation for admission by the screening committee

### Degree Requirements

Students are required to complete 36 credit hours beyond the master's degree write a thesis, and obtain a passing score on the Graduate Comprehensive Examination.

#### Educational Core Requirements

Course	Title	Hours
EDFL 601	Advanced Research and Statistics	3
EDFL 602	Comparative Education, <i>or</i>	3
EDFL 610	School and Community Relations	6
<b>Hours</b>		<b>6</b>

#### Counseling Core Course

COUN 527	Individual Testing I	3
COUN 561	Psychological Aspects of Human Development	3
COUN 517	Lifestyles and Career Development	3
COUN 611	Psychodiagnosis and Treatment	3
<b>Hours</b>		<b>9</b>

#### Concentration Core Courses

COUN 527	Individual Testing I	3
COUN 627	Individual Testing II	3
COUN 606	Behavioral Assessment	3
COUN 514	Counseling Assessment and Evaluation, <i>or</i>	
RHAB 523	Vocational Appraisal	3
<b>Hours</b>		<b>12</b>

#### Clinical Experience

COUN 528	Counseling Gifted	3
COUN 530	Foundations of Test Development	3
COUN 673	Practicum in School Psychometry	3
<b>Hours</b>		<b>9</b>

**Total Hours 36**

The Specialist in Education Program in Psychometry graduate will be eligible to earn the License for Psychometry from the Mississippi Department of Education.

### Master of Science Rehabilitation Counseling Concentration

The Rehabilitation Counseling Degree is a master's level program designed to prepare rehabilitation counselors. Rehabilitation counselors assist individuals with disabilities to adjust to their life circumstances. People with disabilities, regardless of their type, duration, or severity, may experience significant difficulties in social, psychological, vocational and familial aspects of their lives. Employment opportunities for program graduates include rehabilitation facilities, mental health agencies and human service agencies. The program works closely with the Mississippi Department of Rehabilitation

Services in providing field based experiences. Typically, federally funded RSA traineeships are available to full time students.

### Accreditation

The program is accredited by the Council for the Accreditation of Counseling and Related Educational Programs (CACREP).

### Admission Requirements

Applicants are required to have a minimum GPA of 3.00 (based on a 4.00 scale) at the undergraduate level. Applicants with a GPA of 2.80 to 2.99 may be admitted on a conditional basis. A GRE score is not required. Applications for admission are considered for the fall session. Applicants should submit an application along with two copies of official transcripts to the Division of Graduate Studies, three letters of recommendation and a writing sample. Successful candidates for admission must be interviewed by departmental faculty.

### Degree Requirements

The Rehabilitation Counseling Degree is 57 semester hour program. Students seeking a masters' degree in Rehabilitation Counseling must:

1. Complete the 60 hour program.
2. Complete Field based experiences.
3. Pass the Graduate Area Comprehensive Examination (GACE).

### Course Requirements

Course	Title	Hours
<b>Foundations</b>		
RHAB 509	Introduction to Rehabilitation	3
RHAB 516	Medical Information	3
RHAB 533	Career and Job Development	3
RHAB 560	Human Growth and Development in Rehabilitation Counseling Research in Rehabilitation	3
RHAB 594	Seminar in Ethics in Rehabilitation	3
RHAB 678	Multicultural Issues in Rehabilitation Counseling	3
<b>Hours</b>		<b>24</b>

### Skills and Techniques

RHAB 523	Assessment in Rehabilitation Counseling	3
RHAB 524	Vocational Evaluation	3
COUN 526	Dynamics of Group Process	3
RHAB 535	Theories of Rehabilitation Counseling	3
RHAB 531	Case Management in Rehabilitation	3



COUN 611	Psychodiagnosis and Treatment	3
RHAB 532	Vocational Placement	3
	<i>Hours</i>	<u>21</u>
<b>Clinical</b>		
RHAB 577	Practicum in Rehabilitation (100 clock hours)	3
RHAB 579	Internship I (300 clock hours)	3
RHAB 579	Internship II (300) clock hours	3
	<b>Total of 600 Clock Hours</b>	
	<i>Hours</i>	9
<b>Electives</b>		
RHAB 543	Addictions in Counseling	3
COUN 658	Marriage and Family Counseling	3
RHAB 691	Seminar in Substance Abuse	3
	<i>Total Hours</i>	60

**Note: Students need at least 6 hours of Electives from the above list or an alternate Counseling course approved by their Advisor. Students are qualified by the program to sit for the Certified Rehabilitation Counseling Examination (CRC) after completion of at least 75% of their program or 46 credit hours.**

## DESCRIPTION OF DEPARTMENTAL COURSES

### Clinical Mental Health Counseling, School Counseling and Psychometry

**COUN 504 Clinical Mental Health Counseling (3 Hours)** This course is a survey of theoretical and applied information for counselors working in community settings. Course content include history and philosophy, roles of workers, organizational and delivery systems, program development and consultation, specific populations, interviewing, prevention and intervention strategies and current issues related to agency counseling.

**COUN 506 Introduction to Professional Counseling (3 Hours)** Includes goals and objectives of professional organizations, codes of ethics, legal considerations, standards of preparation, certification, licensing, role identity of counselors and other personnel services specialists, and overview of services.

**COUN 510 Organization and Administration of Guidance (3 Hours)** An orientation to guidance and counseling services; the setting in which they are offered and the needs of special populations. Introduction to history, philosophy, legal and ethical issues of guidance and counseling.

**COUN 514 Counseling Assessment and Evaluation. (3 Hours)** An Overview of measurement principles and major approaches to the appraisal of individuals, groups and environments. Comprehensive appraisal methods, specific techniques for selected problem areas, and standardized ability and personality tests will be examined relative the appraisal process in counseling.

**COUN 517 Lifestyles and Career Development. (3 Hours)** Includes such areas as vocational choice theory, relationship between career choice and lifestyle, sources of occupational and educational information, approaches to career decision-making processes and career development exploration techniques.

**COUN 520 Counseling Theories (3 Hours)** Introduction to the underlying principles, dominant theories and application of techniques of counseling with individuals and selected groups.

**COUN 522 Counseling Children (3 Hours)** This course is designed to provide specialized instruction and knowledge related to the topic of counseling children. This course is a fundamental course for aspiring school counselors and other professionals interested in counseling children. This course offers didactic instruction and discussion of counseling techniques useful in various settings, with an emphasis of working with children in school settings.

**COUN 523 Special Topics in Counseling: Collaboration, Consultation and Integrative Practices. (3 hours).** This course focuses on preparing culturally responsive school counselors and other school professionals with the skills needed to address the social, emotional and academic needs of students with disabilities, with specific skills in consultation, collaboration, and intervention strategies from a multi-disciplinary, team-based approach.

**COUN 524 Spirituality in Counseling. (3 Hours)** This course provides specialized instruction and knowledge related to the topic of spirituality and its relationship to counseling.

**COUN 525 Special Topics in Integrated Behavioral Health Care. (3 hours).** This course provides a foundation for clinical mental health and school counseling students to develop and enhance skills, practices and interventions that are used by integrative teams in behavioral healthcare systems.

**COUN 526 Dynamics of Group Processes. (3 Hours)** Includes theory and types of groups, as well as descriptions of group practice, methods, dynamics, and facilitative skills. This also includes supervised practice.

**COUN 527 Individual Testing I. (3 Hours)** Study of the Wechsler Scales including history, standardization, and usage. Supervised practice in administration, scoring, interpretation and report writing.

**COUN 528 Counseling Gifted (3 hours)** Counseling the gifted and creative individuals is a three hours graduate level course for mental health professionals in school, community, and private sector settings. This course provides an advanced knowledge and necessary skills required to provide guidance and counseling

services for children, adolescence and adults. Additionally, this course reviews different theories in creativity and giftedness to facilitate the therapeutic approach and academic management.

**COUN 530 Foundation of Test Development.** (3 Hours) This course is designed to prepare students to understand and apply the procedures of psycho-educational test development. The course covers test design, item preparation, item analysis, standardization, ethical issues in test development, standards of test worthiness such as validity, reliability and cross-cultural fairness, and theoretical and historical basis for assessment techniques.

**COUN 561 Psychological Aspects of Human Development.** (3 Hours) Presents a broad understanding of the nature and needs of individuals at all developmental levels. Emphasis is placed on biological, cognitive, and socio-emotional approaches. Also, included are such areas as human behavior (normal and abnormal), personality theory, and learning theory.

**COUN 571 Counseling Skills.** (3 Hours) Experimental laboratory designed to build basic counseling and interviewing skills. Practice in applying skills will take place through simulations, role playing, and audio and visual media.

**COUN 578 Internship in Counseling** (9 Hours) The student is placed at an agency/institution under the supervision of a university coordinator and an approved onsite practitioner. A minimum of 600 clock hours with 10 hours for small group activities are required for 9 hours of credit. (Prerequisites: COUN 504, 506, 514, 517, 520, 526, 561, 611, 631, 658, 671 and 691).

**COUN 585 Research in Counseling.** (3 Hours) Systematic investigation of factors and procedures relevant to research in counseling.

**COUN 589 Grief Counseling** (3 Hours) This course is designed to familiarize students, teachers, counselors and other professionals with the reactions of individuals to death and dying. This course also focuses on developing a personal perspective of the grief process associated with death and dying.

**COUN 606 Behavioral Assessment** (3 Hours) Overview of behavioral assessment including critical appraisal for educational practices and counseling interviews.

**COUN 611 Psychodiagnosis and Treatment** (3 Hours) This course will introduce students to psychodiagnostics using the Diagnostic and Statistical Manual of Mental Disorders. Emphasis will be placed on consultation and developing a working knowledge of the organizational structure and the professional terminology used in the manual and subsequent treatment plan development including an introduction to psychopharmacology. (Prerequisites: COUN 514, 520).

**COUN 627 Individual Testing II.** (3 Hours) Study of Stanford-Bine and achievement tests including history, standardization and usage, supervised practice in administration, scoring, interpretation and report

writing. Recommend COUN 527 be taken before this course.

**COUN 631 Social and Cultural Foundations in Counseling.** (3 Hours) This course is designed to provide students with an understanding of different cultures, ethnic groups and special populations while addressing competencies for counselors to work effectively across diverse populations in several settings. Opportunities will be provided for personal explorations and engagement in cultural experiences that will enhance the student's awareness, knowledge, skills and attitudes for more effective interactions with a variety of cultural groups.

**COUN 658 Marriage and Family Counseling** (3 Hours) This course will identify individual and family life cycles, describe healthy and dysfunctional characteristics of families; steps and stages in family therapy; identifying strategies for working with single-parent families, blended families, culturally diverse families; substance-related disorders, domestic violence and child abuse; and legal, ethical and professional issues in family therapy.

**COUN 671 Practicum in Supervised Experience and Consultation.** (3 Hours) Prerequisite: COUN 527). Strategies and processes in counseling and consultation will be presented. 100 clock hours of experience required and one-hour individual supervision per week.

**COUN 673 Practicum in School Psychometry** (3 Hours). Prerequisites: COUN 672 and consent of instructor. Field experience of 20 hours a week for one term in a school setting under the supervision of a school psychologist.

**COUN 675 Internship in School Counseling** (6 Hours) The student is placed at a school setting under the supervision of a university coordinator and an approved onsite practitioner. A minimum of 300 clock hours are required. Prerequisites: COUN 506, 510, 514, 517, 520, 526, 561, 631, 671 and 691.

**COUN 676 Counselor Supervision and Theories** (3 Hours) This course provides an overview of models and approaches to counselor supervision and legal and ethical issues of counselor supervision.

**COUN 678 Internship in Counseling.** (6 Hours) The student is placed at a school under the supervision of a university coordinator and an approved onsite practitioner. A minimum of 600 clock hours are required for 6 hours of credit. (Prerequisites: COUN 506, 510, 514, 517, 520, 526, 571, 671, and 561 or 631).

**COUN 687 Advanced Research and Independent Study.** (3 Hours) The course is designed to give the student valuable experience in developing independent research projects. The course may be repeated two or more times until 6 hours have been accumulated.

**COUN 691 Seminar in Legal and Ethical Issues.** (3 Hours) An analysis of current topics, ethical issues, consultation, programs, literature and research in professional counseling.

## Rehabilitation Counseling

**RHAB 509 Introduction to Rehabilitation Counseling.** (3 Hours) Reviews the foundations of rehabilitation counseling, role and function of the rehabilitation counselor and the vocational rehabilitation process.

**RHAB 516 Medical Information in Rehabilitation.** (3 Hours) A survey of physical malfunctions and medical information needed for effective rehabilitation counseling.

**RHAB 523 Assessment in Rehabilitation.** (3 Hours) To prepare rehabilitation counselors to understand the results of psychological evaluations and to use the information to assist the client in vocational planning. The course covers measurement principles, instruments frequently employed by rehabilitation counselors, and application of test results for persons with disabilities.

**RHAB 524 Vocational Evaluation in Rehabilitation.** (3 Hours) Course covers history, scope and purposes of vocational evaluation. Enables students to use evaluation techniques, vocational systems in order to develop and implement a vocational plan for rehabilitation clients.

**RHAB 531 Case Management in Rehabilitation.** (3 Hours) Basic procedures in providing and individual needs and the basics of recording and reporting such services.

**RHAB 532 Vocational Placement, Analysis and Adjustment in Rehabilitation.** (3 Hours) Job development, analysis, job modifications and accommodations for persons with disabilities.

**RHAB 533 Career and Job Development.** (3 Hours) This course is designed to provide supervised experiences for students that will enhance independent living and successful job placement for persons with disabilities. Students will assist persons with disabilities by coordinating and finding suitable employment.

**RHAB 535 Theories of Rehabilitation Counseling.** (3 Hours) Theories and techniques of counseling applied to individuals and groups in rehabilitation services.

**RHAB 540 Assistive Technology.** (3 Hours) This course provides a foundational understanding of Assistive Technology (AT) defined as the application of technology to alleviate barriers that interfere with the lives of individuals with disabilities.

**RHAB 543 Addictions in Counseling.** (3 Hours) Course covers various types of Addictions that affect persons psychologically, physically, emotionally and physiologically. The course will be offered as an elective to Departmental students

**RHAB 560 Human Growth and Development in Rehabilitation Counseling.** (3 Hours) A survey dealing with psychological problems caused by disabilities.

**RHAB 577 Practicum in Rehabilitation Counseling.** (3 Hours) Supervised experiences in human services or rehabilitation settings. Three hundred (300) clock hours are required. Related class work emphasizes interpersonal communication and skills.

**RHAB 579 Internship in Rehabilitation Counseling.** (6 Hours) Prerequisites: RHAB 577 and RHAB 578. Supervised internship in counseling and caseload management in rehabilitation services. A 600-hour field placement for one full semester.

**RHAB 586 Research in Rehabilitation Counseling** Systematic investigation of factors and procedures relevant to rehabilitation research, research writing, and proper proposal development.

**RHAB 594 Seminar in Ethics in Rehabilitation Counseling.** (3 Hours) Multicultural counseling, legislative issues, ethical issues and current topical issues.

**RHAB 678 Multicultural Issues in Rehabilitation Counseling** (3 hours) A multicultural course that explores rehabilitation from a cultural, ethnic, diverse and international perspective. It looks at culture from the counselor's perspective in order that they may better serve the diverse and minority consumer.

**RHAB 691 Seminar: Rehabilitation Substance Abuse.** (3 Hours) Focus on issues research, techniques, applications, and readings in the rehabilitation of persons who are substance abusers

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## DEPARTMENT OF EDUCATIONAL ADMINISTRATION, FOUNDATIONS, AND RESEARCH

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Dr. Ronald E. Walker, Interim Chair and Associate Professor  
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### Faculty

Dr. C. Bishop, Associate Professor-Emeritus  
Dr. A. Carter, Assistant Professor  
Dr. C. Lewis, Assistant Professor  
Dr. J. McClinton, Associate Professor  
Dr. S. McLaurin, Associate Professor  
Dr. B. Ngwudike, Professor  
Dr. F. Okojie, Professor  
Dr. D. R. Robinson-Gardner, Professor  
Dr. L. Sanders, Professor  
Dr. I. Smith, Professor  
Dr. R. Walker, Associate Professor  
Dr. L. Wilson, Associate Professor

### Department Objectives

The mission of the Department of Educational Administration, Foundations, and Research is to support, integrate, and implement the mission of both the University and the College of Education and Human

Development with its own mission of striving for excellence as responsive educators in the teaching and learning process, research, service, and all phases of university life. More specifically, the department is responsible for preparing personnel for leadership roles in traditional and non-traditional settings, including the P-16 schools (building level and district central office level), corporate sectors, as well as governmental and social agencies. A major emphasis is the preparation of leaders capable of managing and motivating people, conducting research, analyzing data, presenting findings, initiating, organizing, and facilitating action plans and establishing programs and strategies geared toward solving broad-based urban and metropolitan problems. The department is responsible for providing and directing programs in foundations (research, statistics, social, cultural, historical, and philosophical); K-12 certification, in higher education administration, in teaching and learning assistance in various areas of social life. Guided by the motto "Involvement is the Cornerstone of Excellence," the department and its programs exist to prepare professional instructional personnel at levels appropriate to the degrees offered and to meet certification requirements at the AA, AAA, and AAAA levels for the State of Mississippi in the various fields. The department also offers the Ph.D., concentration in Higher Education Administration, which prepares faculty and mid/entry level executive personnel for career advancement in institutions of higher education.

The department's objectives are to prepare candidates who can proactively and confidently accomplish the following:

1. Locate, interpret and apply research pertinent to educational problems;
2. Exhibit competency in doing independent original research;
3. Derive the greatest benefits from classroom and online experiences as prepared prospective teachers skilled in the techniques of instruction;
4. Develop competencies and professional leadership skills through the advancement of knowledge and research that enables him/her to assume major leadership roles in diverse communities;
5. Develop an understanding of the basic logical processes and resources useful in information retrieval;
6. Pursue advanced study in the Gestalt of education with emphasis in specialty areas, thus increasing skills and competencies to broaden his/her teaching and administrative efficiency;
7. Acquire knowledge through mastery of research techniques and a desire for inquiry;
8. Demonstrate through multidisciplinary and interdisciplinary comprehensive examinations knowledge at a level expected of a doctoral candidate of new findings and trends in urban education;
9. Demonstrate knowledge of how to utilize knowledge of the Social Sciences and Social Studies in planning and implementing effective leadership.

### **Independent Study: Process and Procedures**

A student may enroll in independent study for 1-6 semester hours. The study will be supervised by a graduate faculty member with expertise in the student's area of interest. At the beginning of the semester in which a student enrolls for an independent study, he/she must confer with the instructor of record to develop a study plan. The plan shall include goals and objectives, activities required for achieving the objectives, a timetable for reporting progress and the criteria to be used in evaluating the course. Once the plan is fully developed, it becomes a contract and is signed by the student and the professor. The professor serves as a facilitator of learning, but also as a resource to the student. Please see College of Education and Human Development academic regulations for additional information.

### **Program in Responsive Education with Clinical Experiences and Professional Training (PRECEPT)**

In keeping with the Responsive Educator Model (REM), the Professional Education Program includes a systematic five-stage strategy for the delivery of required, clinical, and field-based experiences. At Jackson State the PRECEPT Program is sequenced to begin in the first or second semester of freshman studies and extend through doctoral level studies. Initially, at the basic level, campus-based classroom and clinical activities are most dominant, but over time clinical and field-based activities increase with an equivalent reduction in academic, seminar-type activities.

PRECEPT III Master's Degree Level  
 PRECEPT IV Specialist Degree Level  
 PRECEPT V Doctoral Degree Level

The level of difficulty of the sequential experiences moves from the simple to the complex. In essence, PRECEPT stages are both inter and intra dependent while at the same time they are self-contained units of preparation. PRECEPT courses are identified in course syllable.

### **Master of Science in Educational Administration and Supervision On Campus Program**

The Master of Science in Educational Administration and Supervision is a **33** hour degree program designed for students seeking careers in administration and supervision. A Bachelor of Science degree in Education is recommended for the student pursuing graduate study leading to this degree.

#### **Admission Requirements**

Students applying for admission to the Master of Science program must obtain general admission to the Division of Graduate Studies; however, this does not guarantee admission to the Master of Science program. Applications are accepted prior to March 1 of each year for summer and fall admission. Applications are accepted prior to October 15 of each year for spring admission.

Departmental Admission requirements for the program are as follows:

1. A bachelor's degree from an accredited college or university.
2. An overall GPA of 3.0 or above (on a 4.0 scale) on the bachelor's degree.
3. A completed Master of Science program application.
4. Recommendations from three persons, one of whom must be the applicant's supervising principal, or school district superintendent or assistant-superintendent.
5. Acceptable evidence of the applicant's writing ability as determined by a writing assessment completed under the supervision of the screening committee.
6. A successful interview with the program screening committee.
7. A recommendation for admission by the screening committee.
8. Valid teaching certificate.
9. At least 3 years of full-time teaching experience.

**Degree Requirements**

Course	Title	Hours
<b>Phase I: An Introduction to Urban Education</b>		
EDAD 512	Introduction to School Leadership Theories and Practice	3
EDAD 513	School-Based Program Evaluation and Improvement	3
EDAD 514	Leading Change to Support School Improvement	3
EDAD 515	Legal Issues for School Leaders	3
<b>Phase II: Case Problems in Urban Education</b>		
EDAD 516	Leading and Managing Human Resource	3
EDAD 517	Responsibility and Accountability for School Finance	3
<b>Phase III: Exemplary Approaches to Urban Issues</b>		
EDAD 519	Instructional Leadership and Professional Development	3
<b>Phase IV: Effective Leadership in Urban Context</b>		
EDAD 522	Equity and Culturally Responsive Leadership	3
EDAD 523	Building Community Partnerships	3
EDAD 586	Strengthening Literacy for Educational Leaders	3
EDAD 524	Internship	3
<b>Total Hours</b>		<b>33</b>

Note: All students seeking Mississippi Class AA certificates must obtain the Mississippi minimum score on the School Leaders Licensure Exam (SLLA) in order to be recommended for certification.

**Master of Science in Educational Administration and Supervision  
Online Program**

The Master of Science in Educational Administration and Supervision is a 33 hour degree program designed for students seeking careers in administration and supervision. A Bachelor of Science degree in Education is recommended for the student pursuing graduate study leading to this degree.

**Admission Requirements**

Students applying for admission to the Master of Science program must obtain general admission to the Division of Graduate Studies; however, this does not guarantee admission to the Master of Science program. Applications are accepted prior to March 1 of each year for summer and fall admission. Applications are accepted prior to October 15 of each year for spring admission.

Admission requirements for the program:

1. A bachelor's degree from an accredited college or university.
2. An overall GPA of 3.0 or above (on a 4.0 scale) on the bachelor's degree.
3. A completed Master of Science program application.
4. Recommendations from three persons, one of whom must be the applicant's supervising principal or school district superintendent or assistant superintendent.
5. Acceptable evidence of the applicant's writing ability as determined by a writing assessment completed under the supervision of the screening committee.
6. A successful interview with the program screening committee.
7. A recommendation for admission by the screening committee.
8. Valid teaching certificate.
9. At least 3 years of full-time teaching experience.

**Degree Requirements**

Course	Title	Hours
<b>Phase I: An Introduction to Urban Education</b>		
EDAD 512	Introduction to School Leadership Theories and Practice	3
EDAD 513	School-Based Program Evaluation and Improvement	3
EDAD 514	Leading Change to Support School Improvement	3
EDAD 515	Legal Issues for School Leaders	3
<b>Phase II: Case Problems in Urban Education</b>		
EDAD 516	Leading and Managing Human Resource	3
EDAD 517	Responsibility and Accountability for School Finance	3

**Phase III: Exemplary Approaches to Urban Issues**

EDAD 519	Instructional Leadership and Professional Development	3
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**Phase IV: Effective Leadership in Urban Context**

EDAD 522	Equity and Culturally Responsive Leadership	3
EDAD 523	Building Community Partnerships	3
EDAD 586	Strengthening Literacy for Educational Leaders	3
EDAD 524	Internship	<u>3</u>
	<b>Total Hours</b>	<b>33</b>

Note: All students seeking Mississippi Class AA certificates must obtain the Mississippi minimum score on the School Leaders Licensure Exam (SLLA) in order to be recommended for certification.

**Specialist in Education:  
K-12 Educational Administration Concentration  
with Administration Certificate**

**Admission Requirements**

Students applying for admission to the Specialist in Education program must obtain general admission to and submit required documents to the Division of Graduate Studies; however, this does not guarantee admission to the Department of Educational Administration, Foundations, and Research Specialist degree program in the specific area of concentration.

**Admission Requirements:**

A master's degree from an accredited college or university

- An overall GPA of 3.0 or above (on a 4.0 scale) on the master's degree
- A completed Specialist program application
- Three letters of recommendation
- Acceptable evidence of the applicant's writing ability as determined by a writing assessment completed under the supervision of the screening committee
- A successful interview with the program screening committee
- A recommendation for admission by the screening committee/
- A satisfactory GRE score
- A valid teaching license
- Deadline for applications for summer/fall admissions is March 1.

**Retention Requirements**

A minimum grade point average of 3.00 (on a 4.00 scale) on all graduate work earned in the Specialist in Education degree program is required.

**Program Requirements**

<b>Core Course</b>	<b>Title</b>	<b>Hours</b>
*EDFL 601	Advanced Research and Statistics	3
EDFL 610	School and Community Relations	3
<b>Concentration Courses</b>		
EDAD 603	Leadership in the Management of Human Resources	3
EDAD 604	Planning for Effective Professional Development	3
EDAD 609	Administration of School Finances	3
EDAD 610	Seminar in Research and Curriculum	3
EDAD 611	Theories of Administration	3
EDAD 613	Internship in Educational Administration	9
EDAD 615	Legal Issues in Educational Administration	3
EDAD 626	School Superintendency	3
EDAD 690	Thesis <i>or</i>	6
EDAD 691	Specialist Project	<u>3</u>
	<b>Total Hours</b>	<b>39 or 36</b>

**Note:** \*EDFL 601 has required prerequisites (EDFL 514 and 515), the candidate's program total may increase to 30 or 42 hours for candidates who have not had these courses or their approved equivalents.

**Specialist in Education:  
K-12 Educational Administration Concentration  
without Administration Certificate**

Candidates *who do not hold a Masters* degree in Educational Administration **must complete 18 hours of additional prerequisite work.**

<b>Required Prerequisites</b>		
EDAD 515	Legal Issues in Ed Admin	3
EDAD 516	Developing Effective School Based Teams	3
EDAD 517	Responsibility & Accountability for School Finance	3
EDAD 519	Instructional Leadership for Student Achievement	3
EDAD 520	Professional Learning to Promote Student Achievement	<u>3</u>
EDAD 523	Collaborative Leadership	<u>3</u>
	<b>Total Hours</b>	<b>18</b>

Core Course	Title	Hours
*EDFL 601	Advanced Research and Statistics	3
EDFL 610	School and Community Relations	3
<b>Concentration Courses</b>		
EDAD 603	Leadership in the Management of Human Resources	3
EDAD 604	Planning for Effective Professional Development	3
EDAD 609	Administration of School Finances	3
EDAD 610	Seminar in Research and Curriculum	3
EDAD 611	Theories of Administration	3
EDAD 613	Internship in Educational Administration	9
EDAD 615	Legal Issues in Educational Administration	3
EDAD 626	School Superintendency	3
EDAD 690	Thesis <i>or</i>	6
EDAD 691	Specialist Project	3
	<b>Total Hours</b>	39 or 36

**Note:** \*EDFL 601 has required prerequisites (EDFL 514 and 515), the candidate's program total may increase to 30 or 42 hours for candidates who have not had these courses or their approved equivalents. Students will be required to take and successfully pass the written comprehensive examination and obtain approval of the thesis/project by a major advisor and two faculty members. See departmental handbook for additional policies.

#### Other Requirements

Candidates who do not hold the Mississippi Class AA certificate in Educational Administration and Supervision must earn the Mississippi minimum score of the School Leaders Licensure Examination (SLLA) in order to be recommended for certification. Please contact the Department of Educational Leadership for the current required score.

#### Specialist in Education:

##### Higher Education Administration Concentration On Campus Program

The certificate program in higher education administration is designed for individuals who are planning a career or seeking career advancement in the area of higher education. The curriculum will provide the candidate with the appropriate knowledge, skills, and current trends of higher education administration in the administrative process of higher education institutions. Additionally, this program will give those individuals who are employed at the university the opportunity to enhance their skills, knowledge, and attitudes toward the environment in which they work. With the consolidation of programs at four-year

institutions and the growing student population in community colleges, this certificate program will prepare candidates to confidently assume teaching and/or administrative positions in higher education.

#### Purpose

The purpose of this specialist program with a concentration in higher education administration is to provide college administrators and staff the opportunity to study the history, culture, and organizations of higher education through a graduate program that will analyze the many facets of higher education and prepare future higher education administrators for highly effective careers in community colleges and four-year institutions.

#### Enrollment

Enrollment will be limited. Degrees will be awarded upon the candidate successfully completing all of the program requirements. Students applying for admission to the Specialist program must obtain general admission to the Division of Graduate Studies; however, this does not guarantee admission to the College of Education Specialist program in the specific area of concentration. Students must also complete specific departmental admission requirements.

#### Admission Requirements

- A master's degree from an accredited college or university
- An overall GPA of 3.0 or above (on a 4.0 scale) on the master's degree
- A completed Specialist program application
- Three letters of recommendation
- Acceptable evidence of the applicant's writing ability as determined by a writing assessment completed under the supervision of the program/department screening committee
- A successful interview with the program/department screening committee
- A recommendation for admission by the screening committee
- A satisfactory GRE score
- A minimum of 6 years of successful employment in a community college or a four year institution
- Deadline for applications for summer/fall admission is March 1.

#### Requirements

A specialist with a concentration in higher education administration requires the completion of 18 credit hours, 9 hours of core courses and 9 credit hours of electives. All candidates must receive a grade of B or above in each course to receive this degree. Candidates receiving a grade below B will have to retake the course before credits will be awarded. All courses are 3 credit hours and are generally offered once each semester depending upon the availability of the faculty. A total of thirty-six graduate credit hours are required to earn a specialist with a concentration in Higher Education Administration.

<b>Program of Study</b>		
<b>Core Course</b>	<b>Title</b>	<b>Hours</b>
EDAD 625	Organization and Administration in Higher Education	3
EDAD 698	Law in Higher Education	3
EDFL 668	History and Foundations of Higher Education in America	3
	<b>Total Hours</b>	9
<b>Concentration Courses</b>		
EDAD 602	Comparative Education	3
EDAD 603	Leadership in the Management of Human Resources	3
EDAD 617	Student Personnel Services in Higher Education	3
EDAD 630	College Teaching	3
EDAD 634	Technology in Higher Education	3
EDAD 638	The Community College	3
EDAD 639	College Student	3
EDAD 688	Current Trends and Issues in Higher Education	3
EDFL 601	Advanced Research and Statistics	3
	<i>Hours</i>	<u>27</u>
	<b>Total Hours</b>	36

**Enrollment**  
Enrollment will be limited. Degrees will be awarded upon the candidate successfully completing all of the program requirements. Students applying for admission to the Specialist program must obtain general admission to the Division of Graduate Studies; however, this does not guarantee admission to the College of Education Specialist program in the specific area of concentration. Students must also complete an application to the specific department.

- Admission Requirements**
- A master's degree from an accredited college or university
  - An overall GPA of 3.0 or above (on a 4.0 scale) on the master's degree
  - A completed Specialist program application
  - Three letters of recommendation
  - Acceptable evidence of the applicant's writing ability as determined by a writing assessment completed under the supervision of the screening committee
  - A successful interview with the program screening committee
  - A recommendation for admission by the screening committee
  - A satisfactory GRE score
  - A minimum of 6 years of successful employment in a community college or a four year institution
  - Deadline for applications for summer/fall admission is March 1.

**Specialist in Education  
Higher Education Administration  
Concentration  
Online Program**

The certificate program in higher education administration is designed for individuals who are planning a career in the area of higher education. This certificate will provide the candidate with the appropriate knowledge, skills, and attitudes of higher education administration in the administrative process of higher education institutions. Additionally, this program will give those individuals who are employed at the university the opportunity to enhance their skills, knowledge, and attitudes toward the environment in which they work. With the consolidation of programs at four-year institutions and the growing student population in community colleges, this certificate program will prepare them for a future in teaching and/or administrative position in higher education.

**Purpose**  
The purpose of this specialist program with a concentration in higher education administration is to provide college administrators and staff the opportunity to study the history, culture, and organizations of higher education through a graduate program that will analyze the specific areas of higher education, and prepare future and current higher education administrators for community college and four-year institution leadership.

**Requirements**  
A specialist with a concentration in higher education administration requires the completion of 18 credit hours, 9 hours of core courses and 9 credit hours of electives. All candidates must receive a grade of B or above in each course to receive this degree. Candidates receiving a grade below B will have to retake the course before credits will be awarded. All courses are 3 credit hours and are generally offered once each semester depending upon the availability of the faculty. A total of thirty-six graduate credit hours are required to earn a specialist with a concentration in Higher Education Administration.

<b>Program of Study</b>		
<b>Core Course</b>	<b>Title</b>	<b>Hours</b>
EDAD 625	Organization and Administration in Higher Education	3
EDAD 698	Law in Higher Education	3
EDFL 668	History and Foundations of Higher Education in America	3
	<b>Total Hours</b>	9
<b>Concentration Courses</b>		
EDAD 602	Comparative Education	3
EDAD 603	Leadership in the Management of Human Resources	3
EDAD 617	Student Personnel	3



	Services in Higher Education	
EDAD 630	College Teaching	3
EDAD 634	Computers in Education	3
EDAD 638	The Community College	3
EDAD 639	College Student	3
EDAD 688	Current Trends and Issues in Higher Education	3
EDFL 601	Advanced Research and Statistics	3
	<i>Hours</i>	<u>27</u>
	<b>Total Hours</b>	<b>36</b>

**Educational Administration  
Higher Education Concentration  
Certificate Program**

The advanced graduate certificate program in higher education is an 18 hour program. Students may enroll in this certificate program after completing a master's program. This certificate program places emphasis on higher education, management, administration, student affairs, public relations, and institutional leadership. Additionally, this certificate program is designed to prepare students for positions such as director and coordinator of program in the arena of higher education.

**Requirements for Admission**

- A master's degree from an accredited college or university
- An overall GPA of 3.0 and above on the master's degree
- A certificate application
- Three letters of recommendation
- Minimum of (5) years of successful employment in a community college, education institution or with a state and federal government programs

**Certificate Requirements**

Core Course	Title	Hours
(9 hours Required)		
EDFL 601	Advanced Research and Statistics	3
EDHE 625	Organization and Administration Of Higher Education	3
EDAD 638	The Community College	3
EDHE 668	Historical Foundation of Higher Education in America	3
EDHE 698	Law in Higher Education	3
EDFL 668	Finance in Higher Education	3
<b>Electives (9 Hours)</b>		
EDHE 617	Student Personnel – Internship	3
EDFL 602	Comparative Education	3
EDHE 688	Current Trends and Issues in Higher Education	3
EDHE 630	College Teaching	3

EDFH 639	College Students	3
	<i>Required Hours</i>	<u>18</u>

Please note: If students have taken any of the courses listed above, they cannot be used to complete the requirements for this program.

**The Doctor of Philosophy in  
Educational Administration**

**Program Objectives**

The Ph.D. degree has as its goal the training of executive type leaders capable of managing and motivating people toward solving broad-based educational problems, especially those which emerge in response to the dynamic social order of urban communities. The Program consists of three specific concentrations: K-12 administration with an administrative license, K-12 administration without an administrative license and higher education concentration. This goal is supported by the following program objectives:

1. To provide a terminal degree which will prepare individuals for the highest level of leadership, educational practice, and research in either K-12 administration or higher education.
2. To provide an increased number of qualified leaders who can give leadership to traditional and nontraditional educational programs
3. To strengthen the capacity of leaders to conduct educational research and evaluation and to translate findings into creative solutions for urban and rural problems
4. To promote research and development activities which enhance the body of professional knowledge in the field of urban education management for the twenty-first century and beyond
5. To support the educational reform goal of the improved educational administration.

This advanced program of scholarly study and training experiences will prepare graduates to assume leadership responsibilities in the areas of: school and general management and administration, curriculum and instructional development, research and evaluation, staff development and training, student affairs, educational media and technology or combination thereof.

**Program Admission**

Students applying for admission to the Ph.D. program must first obtain general admission to the Division of Graduate Studies; however, this admission does not mean automatic admission to the Ph.D. Program. Applications are accepted year round for admission each fall. **Applications must be submitted prior to March 1.** All students seeking admission to the Ph.D. Program must meet the following criteria:

1. A Master's degree from an accredited university.
2. A completed Ph.D. program application.
3. An overall GPA of 3.5 or above (on a 4.0 scale) on the highest earned degree.

4. Transcripts for all post secondary work attempted prior to submitting a program application.
  5. A satisfactory score on the GRE or on the Miller Analogies Test (MAT) taken in the past 5 years.
  6. Recommendations from three (3) persons knowledgeable of the applicant's professional academic ability, job experiences, and leadership potential such as previous professors, supervisors, and others
  7. Acceptable evidence of a student's writing ability as determined by a writing assessment completed under the supervision of the screening committee.
  8. A successful interview with the program screening committee.
  9. Recommendation for admission by the screening committee.
  10. Concentration in K-12 administration requires evidence of the past three years of successful classroom teaching documentation.
  11. At least three years of full-time teaching experience.
  12. Higher Education Concentration requires a minimum of (5) years of successful employment in a community college, education institution or with a state and/or federal government program.
- a. Earned Master's degree from an accredited institution.
  - b. Earned GPA on all graduate courses completed.
  - c. Writing ability
  - d. Success in current employment
  - e. Administrative experience and/or potential for administrative experience.
  - f. Teaching/work experience
  - g. Communication skills.
6. Transcripts of all post secondary work attempted prior to program application
  7. Recommendations from three (3) persons knowledgeable of applicant's professional academic ability, job experiences and leadership potential such as previous college professors and supervisors
  8. Acceptable evidence of student's writing ability as determined by writing a sample under the supervision of the screening committee member.
  9. A successful interview with the program screening committee.
  10. Concentration in K-12 administration requires evidence of the past three years of successful classroom teaching documentation.
  11. Higher Education Concentration requires a minimum of (5) years of successful employment in a community college, education institution or with a state and federal government program.

#### **Conditional Program Admission**

Conditional admission may be granted to individuals who have obtained general admission to the Division of Graduate Studies but who do not meet regular program admission requirements. All students admitted via the conditional program admission will be required to take a common core of nine (9) semester hours of regular graduate courses during their first semester of enrollment. During this specified period, conditional students must earn a minimum 3.0 GPA in the program of study taken at Jackson State University (transfer hours will not apply) in order to achieve regular status. Once the nine hours are completed, conditionally admitted students will be interviewed a second time by the program screening committee before they are allowed to continue to matriculate in the Ph.D. program. The department screening committee will notify the chair of the department of the results of the second interview. The chair of the department will notify the student by certified mail and a conference with the student will occur before further enrollment. All conditionally admitted students will follow the "Time Limits" policy as stated in this Catalog. If a 3.0 GPA is not attained in the first nine (9) hours attempted, the student will be discontinued from the program. Conditional route admission is based on the following criteria:

1. A Master's degree from an accredited university
2. A completed program application
3. Results of the GRE or MAT examination within a five-year period.
4. A cumulative grade point average of 3.0 or above on all graduate work (4.0 scale)
5. Outstanding compensating strengths measured by the following criteria:

#### **Program of Study**

The initiative in planning the program of study must be assumed by the student. After notification of acceptance, the student should prepare a definition of his or her professional goals and the rationale for desiring the doctoral degree. The statement will be used by the doctoral committee in assisting with the planning of the student's program of study.

The student and major professor, using the statement of professional goals, transcripts of previous graduate work, results of the preliminary exam (if taken), and minimum course requirements, will prepare a tentative program of study which sets forth proposed coursework, independent studies, practicum, and other experiences deemed important. The student's proposed program of study should then be presented to the full committee for review and approval or revision, if necessary.

Since a program of study is individualized based upon a student's need, career goals, academic background, and present level of competence, the planned program of study is always subject to future additions, deletions and substitutions depending upon the needs of the student. These changes may be prescribed throughout the student's program of study by the student's doctoral committee. Proposed changes must be agreed upon the doctoral committee and approved by the Department Chair, and the Dean of the College of Education and Human Development.

#### **Degree Requirements**

All programs of study must include a minimum of 60 semester hours of coursework beyond the master's degree, excluding the dissertation. At least one-half of

this coursework must be at the 600 and 700 levels of study. At least 45 semester hours of coursework and the dissertation must be completed at Jackson State. Subjects covered comprehensively in the student's previous education and in which the student maintains an acceptable level of competence need not be repeated. The typical student may expect to devote three years of full-time graduate study to earning the Ph.D. degree. All students accepted into the program will be required to take the preliminary and the comprehensive examination.

The doctoral program consists of five areas of study. These areas and the minimum semester hours required are:

Educational Administration Core	18
Professional Specialization	18
Evaluation, Research and Statistics	15
Cognate	9
Dissertation	12-15

Students with a master's or specialist degree in educational administration or leadership, who have been admitted to the Ph.D. program; AND, who have completed the prerequisite requirements are expected to complete, at a minimum, the program specified below, as well as other courses the doctoral committee may prescribe.

**Doctor of Philosophy in Educational Administration  
K-12 Administration Concentration without Administration Certificate**

Candidates who do not have a Masters' Degree in Educational Administration and Supervision must complete the following prerequisite courses:

\*Certain courses are restricted in this program.

Course	Title	Hours
EDAD 515	Legal Issues in Ed Admin	3
EDAD 516	Developing Effective School Based Teams	3
EDAD 517	Responsibility & Accountability for School Finance	3
EDAD 519	Instructional Leadership for Student Achievement	3
EDAD 520	Professional Learning to Promote Student Achievement	3
EDAD 523	Collaborative Leadership	3
<b>I. Educational Administration Core</b>		
*EDAD 700	Writing for Educational Leaders	3
*EDAD 701	Contemporary Contexts of Educational Programs and Services	3
*EDAD 702	Educational Leadership in Cross-Cultural Environments	3
*EDAD 703	Educational Policy Analysis and Research in Urban Education	3

*EDAD 704	Applications of Educational Leadership Theories	3
*EDAD 705	Educational, Government and Corporate Relationships	3

**II. Professional Specialization**

*EDAD 720	Organizing and Managing Professional Development	3
*EDAD 721	Management of Organizational Change and Human Relations	3
*EDAD 798	Internship/ Mentorship Approved Electives	9

**III. Evaluation, Research and Statistics**

*EDAD 710	Advanced Statistical Concepts and Computer Analysis	3
*EDAD 712	Qualitative Research Designs and Methods in Education	3
*EDAD 714	Experimental Designs in Education	3
	*Required of all students Approved Electives	6

**IV. Cognate (9 semester hours)**

The cognate should represent a cohesive plan of courses related to and supportive of the student's specialization. These courses are normally taken outside of the Department of Educational Leadership. Although the cognate must show unity, it can be Interdisciplinary in nature and consist of courses offered by several different departments. Only courses taken within the past 10 years will be accepted as cognate courses.

**V. Dissertation**

EDAD 799	Dissertation	12-15
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All students must demonstrate competence in using the computer or complete at least one computer course beyond the minimum electives requirement.

**Doctor of Philosophy in Educational Administration  
K-12 Administration Concentration with Administration Certificate**

Course	Title	Hours
<b>I. Educational Administration Core</b>		
*EDAD 700	Writing for Educational Leaders	3
*EDAD 701	Implementation of Organizational Change	3
*EDAD 702	Equity and Culturally Responsive Leadership	3
*EDAD 703	Educational Policy Analysis and Research in Urban Education	3
*EDAD 704	Applications of Educational Leadership Theories	3

*EDAD 705	Educational, Governmental and Corporate Partnerships	3
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**II. Professional Specialization**

*EDAD 720	Leadership and Professional Development	3
*EDAD 721	Management of Organizational Change and Human Relations	3
*EDAD &98	Internship/ Mentorship Approved Electives	9

**III. Evaluation, Research and Statistics**

*EDAD 710	Advanced Statistical Concepts and Computer Analysis	3
*EDAD 712	Qualitative Research Designs and Methods in Education	3
*EDAD 714	Experimental Designs in Education *Required of all students Approved Electives	6

**IV. Cognate (9 semester hours)**

The cognate should represent a cohesive plan of courses related to and supportive of the student's specialization. These courses are normally taken outside of the Department of Educational Leadership. Although the cognate must show unity, it can be Interdisciplinary in nature and consist of courses offered by several different departments. Only courses taken within the past 10 years will be accepted as cognate courses.

**V. Dissertation**

EDAD 799	Dissertation	12-15
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All students must demonstrate competence in using the computer or complete at least one computer course beyond the minimum electives requirement.

**Doctor of Philosophy in Educational  
Administration  
Higher Education Concentration**

Course	Title	Hours
<b>I. Educational Administration Core</b>		
*EDAD 700	Writing for Educational Leaders	3
*EDAD 701	Implementation of Organizational Change	3
*EDAD 702	Equity and Culturally Responsive Leadership	3
*EDAD 703	Educational Policy Analysis and Research in Urban Education	3
*EDAD 704	Applications of Educational Leadership Theories	3
*EDAD 705	Educational, Governmental and Corporate Partnerships	3

**II. Professional Specialization**

*EDAD 725	Organization and Administration of Higher Education	3
*EDAD 768	History and Foundation of Higher Ed in America	3
*EDAD 698	Law in Higher Education 3 Approved Electives	9

**III. Evaluation, Research and Statistics**

*EDAD 710	Advance Statistical Concepts and Computer Analysis	3
*EDAD 712	Qualitative Research Designs and Methods in Education	3
*EDAD 714	Experimental Designs in Education *Required of all students <b>Approved Electives</b>	6

**IV. Cognate (9 semester hours)**

The cognate should represent a cohesive plan of courses related to and supportive of the student's specialization. These courses are normally taken outside of the Department of Educational Leadership. Although the cognate must show unity, it can be Interdisciplinary in nature and consist of courses offered by several different departments. Only courses taken within the past 10 years will be accepted as cognate courses.

**V. Dissertation**

EDAD 799	Dissertation	12-15
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All students must demonstrate competence in using the computer or complete at least one computer course beyond the minimum electives requirement.

**DESCRIPTION OF COURSES**

**Educational Administration and Supervision  
Course Descriptions:**

*Phase I: an Introduction to Urban Education*

**EDAD 516 Introduction to School Leadership theories and Practice (3 hours) (30 hours of field experience)** This is an introductory course in educational leadership. It is designed to introduce the candidates to theories, action research and theory, effective leadership practices that are related to educational organizations, leadership and ethical behavior, the roles of leadership in decision making process, the social, political, economic, and legal context of schools, the landscape of leadership and best practices for school improvement. Additionally, candidates in this course will analyze the history, philosophy, accountability, and social aspects of educational leadership. They will also investigate and analyze case studies, concepts, administrative theory and leadership, leadership in the change process, engage in action research, and problem-based learning projects

that place emphasis on social justice, apply research-based knowledge to address real-life problems.

**EDAD 513 School- Based Program Evaluation and Improvement (3 hours).** (20 hours of field experience) This course is designed to provide candidates with a thorough knowledge of the theoretical underpinnings of different approaches to school-based program evaluation. This course will afford candidates the opportunity to evaluate school-based programs at diverse partner schools. In addition, the use of evaluation data for program improvement will be explored. This course requires 10 hours of clinical experience in diverse settings and the integration of technology.

**EDAD 514 Leading Change to Support School Improvement (3 Hours)** (20 hours of field experience). This course will build on the organizational theory and practices that require educational leaders to implement and manage change in the school environment. Students will examine change models to increase organizational effectiveness and create a vision for leading change, setting an innovative climate for learning, and negotiating situations involving conflict. Students will examine research on effective negotiation skills; demonstrate an understanding of the Interstate School Leaders Licensure Consortium Standards for School Leaders related to school culture, and diagnose problem areas created by the effects of a changing environment. The fundamental goal is for students to develop a clear and compelling vision for positive change that is standards-based, data-driven, and focused on a consistent conflict-free environment that will contribute positively to student achievement. Specifically, students will be expected to develop an organizational diagnostic and a strategic plan for renewal and change in a K-12 setting.

**EDAD 515 Legal issues for School Leaders (3 hours) (30 Hours of Field Experience).**

This is an introductory course that is designed for those educators and laypersons interested in legal issues affecting P-12 education that have little or no knowledge of or background in school law. This course will address selected school law issues with an emphasis on those having a direct impact at the school building level. Commonly disputed concerns receiving special emphasis include: equal access to education; violence, safety, and discipline; faculty hiring, promotion and tenure; discrimination and sexual harassment; individual educational plans for special needs students; local school governance; curricular issues such as intelligent design vs. evolution; and public support of extracurricular activities. When appropriate, a historical perspective is provided in addition to case and statutory law. External influences on educational policies and operations will be investigated in the context of ethical considerations.

#### *Phase II. Case Problems in Urban Education*

**EDAD 516 Developing Effective School-Based Teams (3 Hours) (30 Hours of Field Experience).**

This course provides the foundations for school leaders leading and managing human resources within

educational organizations. Candidates examine strategies that will attract, motivate, and retain human resources in educational settings to support student achievement. Emphasis is placed on the role of the school leader in developing and maintaining an effective and conducive teaching and learning environment necessary for student growth, and the professional growth of the staff. Other foci are adult learning theories, organizational climate and culture, effective oral and written communication (both within and external to the organization), recruitment, selection, orientation, and induction practices, group facilitation skills, and team building. The candidates will examine various leadership styles that support healthy schools, and develop dispositions, which demonstrate an understanding that their own attitudes and behaviors impact the educational setting. In addition, the course examines the school leader's ethical and moral behaviors as critical factors in working with stakeholders in organizations. Students will exit this course with an understanding of effective team-building skills, group dynamics, successful management practices, time management strategies for conducting productive meetings, effective communication skills, guidelines, strategies in recruiting, hiring, supervising, evaluating and plan for the professional growth of the staff, conflict resolution, employment law, and managing change as skills necessary for leading and managing human resources in educational organizations.

**EDAD 517 Responsibility and Accountability for School Finance (3 Hours)** (20 Hours of Field Experience). This course is designed to analyze the responsibilities of school leaders in the area of school finance. Candidates in this course will engage in all aspects of school finance, through action research, field-based experiences, and lectures from guest practitioners. This course will also require research into state and local finance laws, current legislation, state and local taxation, bonds, and the entire budgeting process. Candidates will engage in 15 hours of field-based experiences.

**EDAD 518 Internship I (3 Hours)** This course provides students with the opportunity to engage in field-based experiential learning activities related to school administration. This is a "hands-on" course that gives the opportunity for students to practice administrative and leadership skills under the guidance of a practicing administrator (mentor). Seminar activities will complement the ongoing field-based experiences, to document administrative and leadership activities, and to assess the usefulness of the internship experiences on their personal educational development as leaders. Students will gain support, guidance, and wisdom from the cohort administrative interns. This course will provide opportunities to examine their own administrative and leadership behaviors, gain insight about different leadership styles, understand the contextual factors that can influence administrative actions, and finally, are able to discuss how different administrative actions affect various aspects of the

educational environment. A total of 9 semester hours is required.

*Phase III. Exemplary Approaches to Urban Issues*

**EDAD 519 Instructional Leadership and Professional Development (3 Hours)** Instructional Leadership provides students with multiple opportunities to critically analyze and apply various contemporary theories of effective school leadership to their professional practice. All theories are aligned with the National Interstate School Leaders Licensure Consortium (ISLLC) standards, Educational Leadership Consortium Council (ELCC) standards and Mississippi Crosswalk Standards, research-based frameworks informing the knowledge base, dispositions, and performances of effective school leaders. The course focuses on the performance aspects of effective leadership, including empowering others, building collaborative organizational cultures, making informed decisions and communicating them skillfully, and resolving conflicts. Participation involves learning theoretical concepts through reflective writing activities, self-assessments, and practice ISLLC exams. The course provides a foundation and an applied practice approach for understanding and utilizing concepts of professional learning with school faculties. School leaders use professional development as a process to enhance classroom practice and improve student learning and overall school success.

**EDAD 520 Professional Development to Promote Student Achievement (3 Hours)**

This course is concerned primarily with the view of dominating ideas and institutions that have affected the course of educational development in the Western Urban World setting. Special emphasis is placed on the views of leading philosophies of education and the implications of these philosophies for modern educational practices. The students will gain an understanding of relationships between major historical, political, sociological, and philosophical shifts and the way, we “do” schooling and education. The students will compare and contrast teaching practices that are influenced and be able to analyze, discuss, and evaluate the implications of a personal set of philosophical beliefs about teaching and learning as well as administration.

**EDAD 521 Internship II (3 Hours)**

This course provides students with the opportunity to engage in field-based experiential learning activities related to school administration. This is a “hands-on” course that gives the opportunity for students to practice administrative and leadership skills under the guidance of a practicing administrator (mentor). Seminar activities will complement the ongoing field-based experiences, to document administrative and leadership activities, and to assess the usefulness of the internship experiences on their personal educational development as leaders. Students will gain support, guidance, and wisdom from the cohort administrative interns. This course will provide opportunities to examine their own administrative and leadership behaviors, gain insight about different leadership styles, understand the

contextual factors that can influence administrative actions, and finally, are able to discuss how different administrative actions affect various aspects of the educational environment. A total of 9 semester hours is required.

*Phase IV. Effective Leadership in Urban Context*

**EDAD 522 Cross-cultural Education for School Leaders (3 Hours)**

This course is designed to introduce the candidates to the study of diversity, multicultural, social justice, and their link to school leadership, cultural understanding concepts, explore social justice for educational leadership, theoretical and practical and critical issues and problems that are related to the organization.. Additionally, this course will focus on the preparation of school leaders who can transform schools by understanding the theoretical, sociological, political and historical elements that are related to ethnicity, race, socio-economic status, gender, exceptionally, language, religion and sexual orientation. Candidates will engage in 15 hours of clinical experience.

**EDAD 523 Building Community Partnerships (3 Hours)**

The focus of this course is an investigation and study of the principles, skills, tasks, practices and communication ability of the school administrator to help maintain open communication between the school and the community. This course is designed to help administrators manage information about their schools and to receive or disseminate it properly. Also, to work collaboratively with all stakeholders effectively create a positive learning environment. The study of various media and constituents, as well as a variety of experiences relating to the public relations function of the school and district, is treated as a function of collaborative leadership. Participants will explore the practical advice on communicating with students, staff, and community stakeholders and identify the components of creating and implementing a step-by-step school-community relations program. This course will incorporate the requirements for working with diverse audiences and the role and power of new technology in school community relations.

**EDAD 524 Internship (3 Hours) (150 Hours of field experience).**

This course provides students with the opportunity to engage in field-based experiential learning activities related to school administration. This is a “hands-on” course that gives the opportunity for students to practice administrative and leadership skills under the guidance of a practicing administrator (mentor). Seminar activities will complement the ongoing field-based experiences, to document administrative and leadership activities, and to assess the usefulness of the internship experiences on their personal educational development as leaders. Students will gain support, guidance, and wisdom from the cohort administrative interns. This course will provide opportunities to examine their own administrative and leadership behaviors, gain insight about different leadership styles, understand the contextual factors that can influence administrative actions, and finally, are

able to discuss how different administrative actions affect various aspects of the educational environment.

A total of 9 semester hours is required.

**EDAD 553 Human Resource Leadership (3 Hours)**

This course provides the foundations for working with people within educational organizations and programs in an urban setting. Emphasis is placed on individuals within context, management theory, adult development and learning, communications in organizations, personnel issues, and professional development. Other foci are performance appraisal, effective oral and written communication (both within and external to the organization), group facilitation skills, and team building. The student will examine attitudes and an understanding that their own attitudes toward ethical and moral behaviors are critical in working with people in organizations. They will move toward a realization that human growth and development are lifelong pursuits, and toward an acceptance that effective administrators respect the attitudes and values of the people with whom they work. Students will exit this course with an understanding of group dynamics, how research relates to good management practices, how the contextual factors of an organization can affect people interacting both as colleagues and supervisors, identify and analyze the moral and ethical issues that arise in working with individuals in organizations, elements of effective work groups, staff meetings, committees, communication networks, processes of recruiting, hiring, developing, directing, and supervising staff within educational organizations, and explore how change processes relate to developing staff in educational organizations.

**EDAD 555 Educational Administration Internship II (1-3 Hours)**

This course provides students with the opportunity to engage in field-based experiential learning activities related to school administration. This is a "hands-on" course that gives the opportunity for students to practice administrative and leadership skills under the guidance of a practicing administrator (mentor). Seminar activities will complement the ongoing field-based tasks by allowing students to reflect on their field experiences, to document administrative and leadership activities, and to assess the usefulness of the internship experiences on their personal development as educational leaders. Students will gain support, guidance, and wisdom from the cohort administrative interns. This course will provide opportunities to examine their own administrative and leadership behaviors, gain insight about different leadership styles, understand the contextual factors that can influence administrative actions, and, finally, be able to discuss how different administrative actions affect various aspects of the educational environment. A total of 9 semester hours is required.

**EDAD 603 Leading and Managing Human Resources. (3 hours)**

The course examines the management of human resources in educational organizations. Specific attention is given to personnel supervision and administrative responsibilities including human resource planning, recruitment and selection, implementation and evaluation of professional development.

**EDAD 604 Planning for Effective Professional Development (3 hours)**

This course examines effective steps in designing professional development for all stakeholders in educational organizations. Candidates will examine research-based practices proven

successful in planning, implementing and evaluating professional development for educators.

**EDAD 607 School Business Management. (3 Hours)**

Development and Administration of the school budget; purchasing procedures; financial accounting and reporting; protecting property and persons; school plant operation and management.

**EDAD 608 Planning Educational Facilities. (3 Hours)**

A study of problems involved in planning, programming, financing and construction, care and maintenance, problems with equipment.

**EDAD 609 Administration of School Finance. (3 Hours)**

An examination of school finance theory and its application in P-16 schools. Prerequisite: EDAD 560.

**EDAD 610 Seminar In Research In Curriculum and Supervision. (3 Hours)**

A critical analysis is made of the methods and results of current and recent research in curriculum and in supervision.

**EDAD 611 Theories of Administration. (3 Hours)**

Topics include: Nature of theory, theory building, and current theories of administration.

**EDAD 612 Seminar In Educational Administration. (3 Hours)**

Consideration of problems and issues in educational administration or case studies in educational administration as announced for a given semester.

**EDAD 613 Internship In Educational Administration. (9 Hours)**

Cooperatively guided administrative experience in selected school, school systems, and educational agencies for advanced students.

**EDAD 615 Legal Issues in Educational Administration (3 Hours)**

An examination of the statutory, regulatory and case law as related to the provision of educational programs in P-20 school districts. Prerequisite: EDAD 554.

**EDAD 625 Organization and Administration of Higher Education Institutions. (3 Hours)**

The purpose of this course is to study the problems in the organization and administration of institutions of higher learning. The focus will include administrative functions of planning, organizing, staffing, budgeting, evaluation, school accountability, accounting and auditing procedures, maintenance and operation of plant, and auxiliary services.

**EDAD 626 School Superintendency. (3 Hours)**

Organization and management of the total school district.

**EDAD 630 College Teaching (3 Hours)**

This course is designed to provide students with an overview of the various instructional strategies that are utilized by teachers on the college level.

**EDAD 634 Technology In Education. (3 Hours)**

This course is designed to cover theory, techniques, and practices of using computers and computer-assisted instruction (CAI) in education. No previous background in computers and programming is assumed.

**EDAD 638 The Community/Junior College (3 Hours)**

This course is designed to provide the graduate student with a comprehensive overview of the community/junior college. Emphasis will be placed on the development, function, curriculum, and issues, regarding the community/junior college.

**EDAD 668 Finance In Higher Education (3 Hours)**

This course is designed to give students a comprehensive overview of finance in higher education. Emphasis will be placed upon sources of revenues, allocating, expenditures, and funding.

**EDAD 686 Special Topics In School Administration.** (1- 3 Hours) The study of current educational Issues in terms of curricula, personnel, finance, facilities, services, operation, transportation, management and law. Content will be developed around assessed needs, interests, goals or objectives of the group(s) involved.

**EDAD 687 Research and Independent Study In Education.** (1-3 Hours) Opportunity for students to undertake independent study and research under the direction of a faculty member. At the close of the period of study, the student will submit a written report.

**EDAD 690 Thesis.** (1-6 Hours) A candidate for the Specialist in Education degree may choose to present a Thesis embodying the results of the individual's research. The candidate chooses his problem, but approval by his adviser and committee is required.

**EDAD 698 Law and Higher Education** (3 Hours) Will deal with the constitution and the case law that has developed in applying the constitution to the public policy issues involved in the Higher Education institutions.

**EDAD 700 Research Writing for Educational Leaders.** (3 Hours) Prerequisite: Official admission to the Ph.D. program in Educational Administration. This course is an advanced course in scholarly, research writing, which examines the written communication skills that are required of educational leaders and provides students with writing skills and style-appropriate writing of article critiques, scholarly summaries, proposals, dissertations, articles, and other scholarly educational documents.

**EDAD 701 Implementation of Organizational Change** (3 Hours) Official admission to the Ph.D. program in Educational Administration. This course emphasizes theoretical frameworks for implementing change within organizations through application of knowledge of organizational theories. It provides a structured process for making impactful decisions and effectively communicating and implementing the changes; enhances understanding of analysis and change principles; and entails a component of building effective professional relationships in the workplace.

**EDAD 702 Equity and Culturally Responsive Leadership** (3 Hours) Prerequisite: Official admission to the Ph.D. program in Educational Administration. Designed to provide educational leaders insights and background into the lifestyles, values, and aspirations of culturally different Americans as related to the administration process. Emphasis upon the culturally different in urban environments and their educational and human resource needs as well as responsive program models.

**EDAD 703 Educational Policy Analysis and Research in Urban Education** (3 Hours) Prerequisite: Official admission to the Ph.D. program in Educational Administration. Analysis of readings and research on problems related to urban education, learners, environments, institutions educational leadership.

**EDAD 704 Applications of Educational Leadership Theories.** (3 Hours) Prerequisite: Official admission to the Ph.D. program in Educational Administration. This course focuses on effective leadership practices through research and theory. It is designed to provide students with a solid theoretical foundation for effectiveness in administration. In gaining knowledge of educational theories, candidates analyze the history, philosophy, accountability and social aspects of educational leadership. Candidates analyze case studies, concepts, and administrative theory, engage in action research and

problem-based learning, and apply research-based knowledge in preparation to lead effectively.

**EDAD 705 Educational, Governmental, and Corporate Partnerships** (3 Hours) Prerequisite: Official admission to the Ph.D. program in Educational Administration. Analyzes urban institutions as policy systems and the educational role of leaders. Researches state policy processes, the constraints imposed by Federal law and subsequent court decisions. Evaluates the implications of federal and state systems for local control program coordination and resource allocation. Examines the effects of community expectations and participation in policy-making in urban institutions.

**EDAD 710 Advanced Statistical Concepts and Computer Analysis** (3 Hours) Prerequisite: EDAD 534 or EDAD 634 and EDFL 515 and EDFL 514 or their equivalent. Official admission to a doctoral level program. A study of advanced statistical procedures: analysis of variance; randomized block, factorial, and repeated measurement designs; analysis of co-variance; non- parametric tests: simple, multiple, and curvilinear regression; introduction to path analysis canonical correlation, discriminate, and factor analyses; emphasis on educational research problems.

**EDAD 711 Studies and Practicum in Educational Assessment and Evaluation** (3 Hours) Prerequisite: Official admission to a doctoral level program. Current models and issues in educational assessment and evaluation as a professional practice are explored. Students must design, develop, and implement comprehensive needs assessment and evaluation plans which include specification of a theoretical framework, problem identification, data collection/analysis procedures, report writing format, and dissemination plans. Students are assigned to institutions, offices or agencies engaged in educational research.

**EDAD 712 Qualitative Research Designs and Methods in Education** (3 Hours) Prerequisites: EDAD 534 or EDAD 634 and EDFL 515 and EDFL 514 and EDAD 710 or their equivalent. Official admission to the doctoral level program. Exploration of qualitative research designs and methods, the analysis of qualitative data and the uses of qualitative research in education. Field research techniques will be reviewed and utilized in projects by students.

**EDAD 713 Information Management Systems for Educational Leaders** (3 Hours) Prerequisite: EDAD 534 or EDAD 634 or equivalent demonstration of computer competency or one computer course. Official admission to a doctoral level program. Theory, design, and analysis of computer systems for the management of educational information systems. Survey of information requirements, construction and evaluation of systems, and operation of statistical packages necessary for developing educational management information systems.

**EDAD 714 Experimental Designs in Education** (3 Hours) Prerequisites: EDAD 534 or EDAD 634 and EDFL 515 and EDFL 514 and EDAD 710 or their equivalent. Official admission to a doctoral level program In-depth, advanced study of statistical techniques and experimental designs most appropriate for solving specific problems in the workplace; emphasis on applied multivariate analysis, multiple regressions and factor analysis.

**EDAD 715 Legal Issues in Educational Administration** (3 hours). Prerequisite: Official admission to the Ph.D. program in Educational Administration. This course is an examination of the



process for addressing legal issues in education and of the statutory, regulatory, and case law as related to the provision of educational programs. It focuses on issues that impact learning in k-12 schools; advocates for urban education; specific past legal cases that can be referenced for present legal issues; and successful approaches to implement change based on new legislation, state and federal mandates. This course has field-based experience that allows students to interact with elected officials and district leaders who are often faced with addressing legal issues relative to education.

**EDAD 720 Leadership and Professional Development** (3 Hours) Prerequisite: Official admission to a doctoral program. Explores the processes, structures and procedures which facilitate in-service performance improvement. Examines the utilization of needs assessment data, the design of experiences, the selection of consultants, scheduling and other related issues that aid in the decision process for selecting effective professional development for faculty, staff, and personnel who have a positive-impact on academic performance for faculty and students.

**EDAD 721 Management of Organizational Change and Human Relations** (3 Hours) Prerequisite: Official admission to a doctoral level program. Emphasizes relationships among individual and group behaviors; role of administrators; on-site analysis of organizations and change principles; enhances understanding of organizational theory and the appropriate techniques in decision making, communication and human relations required by the educational leader.

**EDAD 723 Accountability for School & District Finance** (3 Hours). Official admission to the Ph.D. program in Educational Administration. This course allows candidates to analyze the accountability and responsibilities of school and district leaders with finances and budgets. Candidates will engage in all aspects of school finance, through action research, field-based experiences and interaction with finance leaders in k-12 settings. It requires research and understanding of local, state, and federal laws as well as funded and unfunded mandates.

**EDAD 726 District Superintendency** (3 Hours). Because Educational leaders must understand the principles of leadership on the district level, candidates need opportunities to engage in lectures, forums, and related discussions that provide informational knowledge of district organization and outline basic responsibilities common among all superintendents/district leaders. This course provides such opportunities to investigate, research, and identify factors that influence a superintendent's decision-making and how those factors impact teaching and learning.

**EDAD 787 Research and Independent Study in Educational Administration** (Varied 1-6 Hours) The purpose of this course is to provide the opportunity for students to undertake independent study, research under the direction of a faculty member and focused toward the student's goal.

**EDAD 796 Special Topics in School Administration** (Varied 1-6 Hours) The purpose of this course is to study the current educational issues in terms of curricula, personnel, finance, facilities, services, operation, transportation, management and law Content will be developed around assessing needs, interests, goals or objectives of each individual doctoral program of study.

**EDAD 798 Internship/Mentorship Experience** (3 Hours) Prerequisite: Consent of Program Coordinator. A well planned exercise of at least a 360 clock hour, semester long, supervised, administrative internship of uninterrupted and concentrated work in the area of specialization. Students who lack significant administrative experience prior to entering may be required to spend up to one full year of internship at the discretion of the doctoral committee. Locations for internships may include elementary, middle or secondary school settings, central offices or other educational settings. A written report and an evaluation of the internship are required at the end of the field experience.

**EDAD 799 Dissertation** (12-15 Hours) Prerequisite: Consent of Major Professor. A dissertation showing the power of independent research and skill in organization and presentation must be prepared on some topic in the major field. It must comprise a definite contribution to knowledge. Satisfactory completion of the dissertation requirements culminates with the passing of an oral defense before the dissertation chair and dissertation committee.

### Educational Leadership

**EDFL 511 History and Philosophy of Education.** (3 Hours) This course is concerned primarily with the review of dominating ideals and institutions that have affected the course of educational development in the western world. Special emphasis is placed on the review of the leading philosophers of education and their implications for modern education.

**EDFL 512 The Evolution of American Education** (3 Hours) This course is concerned primarily with the review of dominating ideas and institutions that have affected the course of educational development in urban settings. Special emphasis is placed on the views or leading philosophies of education and the implications of these philosophies for modern educational practices. The student will gain an understanding of relationships between major historical, political, and sociological, and philosophical shifts and the way we "do" schooling and education. The students will compare and contrast teaching practices that are influenced by these historical and political forces. At the conclusion of this course the student will understand and be able to analyze, discuss, and evaluate the implications of a personal set of beliefs about teaching and learning.

**EDFL 513 Elementary Statistics for Urban Settings** (3 Hours) The purpose of this course is to give the educational leadership skills in methods of collecting, tabulating, analyzing, and recording data. It will provide the educational leader with an understanding of the essential statistical concepts in order to read and understand current research and create new research in the field of educational leadership that focuses on problem solution.

**EDFL 514 Elementary Statistics** (3 Hours) This course is designed to enable students to determine appropriate statistical procedures for data analysis, to utilize the computer, and to have sufficient confidence in their understanding and not be intimidated by statistical experts.

**EDFL 515 Methods of Educational Research.** (3 Hours) Prerequisite: EDFL 514, PSY 531 or its equivalent; Elementary Statistics or its equivalent. An introductory course which will consider the nature of problems in the field of educational research and the various techniques used in the solution of these

problems. Emphasis will be placed on selecting appropriate statistical treatments in experimental and descriptive research. The applicability of the computer to educational research will be introduced.

**EDFL 516 Becoming Skillful Consumers for Educational Research** (3 Hours) The emphasis in this course will be placed on identifying problems and on selecting the appropriate methodologies used for the various research investigations. The student will produce and develop research proposals which will aid in the solution to present day problems within the American school system. The student will exit the course as consumers of research and critical readers of research related to education and with the tools to make sound judgments on the appropriateness of transporting the research into practice.

**EDFL 534 Technology in Education** (3 Hours) This course is designed to cover theory, techniques, and practices of using computers and computer-assisted instruction (CAI) in education. No previous background in computers and programming is assumed.

**EDFL 566 Teaching In the Multicultural Classroom.** (3 Hours) This course will provide training in interaction analyses. Communication skills, discipline in the classroom, behavior modification and competency based education. The participants will be introduced to concepts through role playing, confrontations and simulation exercises and through the use of outside consultants.

**EDFL 568 Curriculum Methods.** (3 Hours) This course is designed to provide "educators" with a comprehensive understanding of Curriculum Methods. Special emphasis will be placed on the philosophical and historical antecedents of the various curricula in practice at the present time and possible future curriculum developments as related to specific disciplines.

**EDFL 568A Special Projects: Planning the Curriculum for Secondary Schools.** (3 Hours) This course is designed primarily for in-service personnel in education desiring enrichment activities in Secondary Education. Students taking this course will be engaged in activities directed toward planning, developing, and evaluating curricular materials that may be used for teaching K-12 grades.

**EDFL 569 Approaches to Teaching and Learning in Urban Settings.** (3 Hours) This course is designed to provide educational leaders with a comprehensive understanding of curriculum methods their design, implementation, assessment, improvement, and evaluation in urban settings. It will provide practical approaches to curriculum development and curriculum management. Special emphasis will be placed on the historical and philosophical influences on curriculum from the early stages to the present. It is also an assumption that students in this course are familiar with Mississippi State Curriculum Structures in the various disciplines and the curriculum standards from the different academic disciplines and can apply them. The student will become familiar with and skilled in the process of curriculum alignment-which is the correlation of the curriculum with state and national standards, state and national assessment programs and resources.

**EDFL 581 Principles of Measurement.** (3 Hours) A study of the theoretical principles of measurement which are applicable to both teaching and research. Part of the course will be devoted to current issues in measurement

and to practical applications of these theoretical principles.

**EDFL 587 Research and Independent Study in Secondary Education.** (Credit Varies 1-6 Hours) Prerequisite: Graduate standing. Research work in any area of secondary education. Approval of adviser is required.

**EDFL 590 Thesis.** (3 Hours) An independent investigative work in secondary education. The candidate chooses his problem, but approval by the department is required.

**EDFL 592 Seminar in Supervision of Student Teaching.** (3 Hours) Prerequisite: Approval of instructor. Designed to assist supervising teachers with guidance of student teachers. In addition to rationale, and dominant ideas in the literature of supervision, the following topics will be studied: trends in teacher education, orientation of student teachers to student teaching, responsibilities of the supervising teacher and college personnel conference with student teachers and evaluation of student teaching.

**EDFL 593 Advanced Seminar in Supervision of Student Teaching.** (3 Hours) A practicum for in-service teachers who are preparing to be master teachers, interns, beginning teachers, or a teaching team.

**EDFL 596 Special Topics in Education.** (1-6 Hours) This course is designed to meet the needs of teachers, students, administrators, community leaders and other personnel who have special needs and interests in selected areas of education. Content will be developed around assessed needs, interests, and goals or objectives of the group(s) involved. This course will deal with special topics which may be treated more effectively as a mini-course, institute seminar or as a workshop instead of as a regular course.

**EDFL 597 Diagnostic and Prescriptive Teaching of Mathematics.** (3 Hours) This course is designed for persons who teach students mathematical ideas in both the elementary and secondary schools. It will assist in identifying the disabled learner, developing curriculum for the disabled learner, and specifying activities for the disabled learner.

**EDFL 598 The Pupil and the Law.** (3 Hours) The Pupil and the Law will deal with the constitution and the case law that has developed in applying the constitution to broader public policy issues involved in public school education. We will deal with topics such as the legal foundations of American Public education, student's rights and responsibilities, the power of public school authorities, discrimination in public education, and the rights and responsibilities of public school teachers.

**EDFL 599 Urban Education.** (3 Hours) This course is concerned with factors that have contributed to the present crisis in urban life and the status of urban schools. Attention is given to public school support, school organizational patterns, teaching personnel and staff, students, curriculum design, discipline, instruction and physical facilities.

**EDFL 601 Advanced Research and Statistics.** (3 Hours) Prerequisites: EDFL 514, EDFL 515 or their equivalent. This course is designed to promote understanding of research designs, the spirit of research, and the relationship that research bears to statistical trends and techniques. The computer is used extensively in the solution of statistical problems.

**EDFL 602 Comparative Education.** (3 Hours) A study of the historical and philosophical developments of the world's different educational systems. Major emphasis is placed on the role of these systems in the

development and continuation of the social and governmental structure and their effect upon the educational process within different countries.

**EDFL 610 School and Community Relations.** (3 Hours) A study of the relationships and partnerships that exist between school administration and the community. The community school concept, public opinion, community analysis, public relations, community characteristics affecting the quality of education both positively and negatively, and public participation in educational planning.

**EDFL 621 Problems of Teaching in Secondary Schools.** (3 Hours) Prerequisites: Advisor's consent. A study of the philosophy, purposes and organization of the secondary school in our modern social order. Special attention is given to the history of the modern secondary school.

**EDFL 627 Seminar in the Supervision of Instruction.** (3 Hours) The interpretation of research reports, the design of research plans, the development of instrumentation appropriate to the development of instructional programs.

**EDFL 630 Trends and Issues in Community College Curriculum and Instruction.** (3 Hours) Major issues in curriculum and instruction in the community/junior college with an analysis of recent trends. Exploration of historical and current alternative curriculum and instruction organization strategies.

**EDFL 631 Statistical Regression.** (3 Hours) Prerequisite: EDFL 514; EDFL 515 or their equivalent. Linear and multiple regression, nonlinear regression, analysis of variance, random fixed, mixed methods, expected mean square, pooling multiple comparisons, analysis of co-variance.

**EDFL 634 Technology in Education** (3 Hours) This course is designed to cover the theory, techniques, and practices in using computers and computer-assisted instruction (CAI) in education. No previous background in computers and programming is assumed.

**EDFL 686A Special Projects: Planning the Curriculum for Secondary Schools.** (3 Hours) This course is designed primarily for in-service personnel in education desiring enrichment activities in Secondary Education. Students taking this course will be engaged in activities directed toward planning, developing, and evaluating curricular materials that may be used for teaching P-20 grades.

**EDFL 687 Research and Independent Study (Credit Varies).** (1-3 Hours) Opportunity for students to undertake study and research under the direction of a faculty member. At the close of the period of study, the student will submit a written report.

**EDFL 690 Thesis** (1-6 Hours) Candidate for the Master of Science degree may choose to present a thesis embodying the results of the individual's research. The candidate chooses his problem but approval by his advisor and committee is required.

**EDFL 696 Special Topics in Education.** (3 Hours) This course is designed to meet the needs of teachers, students, administrators, community leaders and other personnel who have special needs and interests in selected areas of education. Content will be developed around assessed needs, interests, and goals or objectives of the group(s) involved. This course will deal with special topics which may be treated more effectively as a mini-course, institute seminar or as a workshop instead of as a regular scheduled course.

**EDFL 732 Nonparametric Methods In Statistics.** (3 Hours) Prerequisite: EDFL 514; EDFL 515 and 601 or

their equivalent. Confidence intervals and tests of hypothesis when no functional form is postulated for the population Sign, spread tests, tolerance limits, tests of independence, rank correlation, non-normal analysis of variance, consistency and power of various tests.

**EDFL 797 Research Design** (3 Hours) Prerequisites: EDFL 514; EDFL 515 and 601 or their equivalent. Theory and research in education, potentials and limitations of research, research design, tools and approaches used in inquiry, methods of research regarding educational decision making, Introduction to automated data processing, critical analysis of research studies in education.

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## DEPARTMENT OF Educational, Multicultural and Exceptional Studies

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## MASTER OF ARTS IN TEACHING - TEACHING

**Master of Arts in Teaching**  
Concentration: Elementary Education  
Concentration: Secondary Education

Dr. Dennis Williams, MAT Coordinator  
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E-mail: dennis.d.williams@jsums.edu

### Program Objective

Mississippi is facing a severe problem because of the limited number of highly qualified classroom teachers. The alternate route program provides a mechanism for persons holding bachelor level non-education degrees from an accredited institution to become highly qualified teachers in grades 4-6 and secondary education. A license through the MAT Program may be secured through two methods.

### Admission Requirements

1. Complete a Division of Graduate Studies Application packet.
2. Complete MAT program application packet.
3. Applicants must provide proof of State required scores for Praxis CASE (or ACT 21 Score with subcategory scores 18 and above) and Praxis II.
4. Applicants must have at least a GPA of 2.75.

- Applicants will successfully respond to writing and oral exercises administered by the Faculty Screening Committee.

### Program Requirements

#### Method I

- Complete the pre-teaching required courses (6 hours—SPED 507 or EDCI 556 and EDFL 581)
- After successfully completing the pre-teaching required courses, students must apply through the Center for Teacher Quality for a **Provisional Class “A”** three-year license. Requirements for obtaining this **Class “A” License** are the submission of an official transcript and original PRAXIS Case and PRAXIS II scores.
- Secure approved employment as a teacher in a state accredited school district and enroll in the Teaching Internships, which is two semesters (EDCI 500 and EDCI 599) for a total of 6 hours. The professor of the internship courses must approve employment site for purposes of supervision.
- After successfully completing the internship required courses, students must apply through the office of Professional and Field Base Experiences for a **Standard Class A”** five-year license. Requirements to obtain this **Class “A” License** are the submission of an official transcript.

*Note: Students must successfully complete the pre-teaching courses before enrolling in EDCI 500 or EDCI 599.*

#### Method II

- Successfully completing requirement for Method I.
- Complete the additional course work (see below) required for MAT degree. Once the degree is conferred, the student may apply for a **Standard Class “AA”** license through the Center for Teacher Quality. Requirements to obtain this **Class “AA”** license are submission of an official transcript indicating degree conferred.

Course	Title	Hours
<b>Pre-teaching Core Courses</b>		
EDCI 556	Classroom Management	3
EDFL581	Principles of Measurement	3
<b>Professional Core Courses</b>		
SPED 500	Survey of Exceptional Children and Youth	3
EDCI 589	Teacher Education Programs and Technology	3
EDCI 568	Curriculum Methods	3
EDFL 514	Elementary Statistics	3
<b>Internship Courses</b>		
EDCI 500	Introduction to Teaching Internship	3
EDCI 599	Introduction to Teaching Internship	3

### Elementary Education Concentration Courses

RE 511	The Reading and Writing Connection	3
RE 512	Using Literature to Teach Reading Skills	3
RE 552	Methods of Materials for Teaching Elementary Reading	3
RE 553	Phonics for the Reading Teacher	3
<b>Total Hours</b>		<b>36</b>

### Secondary Education Concentration Courses

RE 507	Basic Skills in Reading	3
RE 510	Reading in the Content Area	3
<b>Specialization</b>		
Two courses in the designated content area based on Praxis II		6
<b>Total Hours</b>		<b>36</b>

This Program requires thirty-six (36) graduate hours. Prior to enrollment in classes for the degree, please receive appropriate advisement from an advisor in the Office of Master of Arts in Teaching.

## SECONDARY EDUCATION

### **Master of Science in Education with a Secondary Education Concentration**

The Master of Education Degree is offered in selected areas of certification at the secondary level. This program is operated under the Center for Teacher Quality.

#### **Admission Requirements**

To be considered for admission, an applicant must hold a bachelor's degree from a regionally accredited college or university and meet the requirements for admission to the Graduate School. Applicants must hold a Non-Provisional Class A teaching certificate. Admission and completion of the program does not guarantee certification of persons desiring certification in a particular area of certification, they must consult the certification officer of the university.

#### **Degree Requirements**

A comprehensive examination and completion of a thesis or project is required of all masters' degree candidates.

#### **Core Courses**

Course	Title	Semester Hours
EDFL 511	History and Philosophy of Education	3
EDFL 568	Curriculum Methods	3

**Specialization**

Eighteen hours of electives are to be taken in the area of concentration in consultation with the student's advisor. 18

**Research Requirements**

EDFL 514	Elementary Statistics	3
EDFL 515	Methods of Research	3
EDFL 534	Computers in Education	3
	<b>Total Hours</b>	<u>36</u>

**Specialist Degree in Education with a  
Secondary Education Concentration**  
*(Math, English, History, and Science)*

Students applying for admission to the Specialist program must obtain general admission to the Division of Graduate Studies; however, this does not guarantee admission to the College of Education Specialist program in the specific area of concentration. Students must also complete an application to the specific department.

**Admission Requirements**

- A master's degree from an accredited college or university
- An overall GPA of 3.0 or above (on a 4.0 scale) on the master's degree
- A completed Specialist program application
- Three letters of recommendation
- Acceptable evidence of the applicant's writing ability as determined by a writing sample completed under the supervision of the screening committee
- A successful interview with the program screening committee
- A recommendation for admission by the screening committee
- A satisfactory GRE score
- Student must hold a valid teaching license
- Deadline for applications for summer/fall admissions is January 15th

**Core Courses**

Course	Title	Semester Hours
EDAD 626	School Superintendency	3
EDFL 610	School and Community Relations	3
EDFL 634	Computers in Education	3
SPED 601	Guidance for Exceptional Children and Youth	3
SPED 603	Psychoeducational Evaluation of Exceptional Children	3
<b>Research Requirements</b>		
EDFL 601	Advanced Research and Statistics	3
EDFL 581	Principals of Measurement	3
EDFL 691	Project Writing	<u>3</u>

**Specialization**

Twelve hours of electives are to be chosen in student's area of certification in consultation with the student's advisor 12  
**Total hours** 36

**SPECIAL EDUCATION**

Dr. Locord Wilson, Interim Associate Dean and Department Chair

P. O. Box 17870  
Telephone: (601) 979-6330  
**Email:** locord.d.wilson@jsums.edu

**Faculty**

Dr. G. Williams, Associate Professor  
Dr. G. Windfield, Assistant Professor

**Mission**

The Department of Special Education is located in the College of Education and Human Development. The Department of Special Education offers the Master of Science in Education Degree (M.S.Ed.) in Mild/Moderate Disabilities and Visually Impaired. The Specialist in Education Degree (Ed.S.) with a concentration in Mild/Moderate Disabilities is offered. The department also offer courses for add-on endorsements in Mild/Moderate K-12, Visually Impaired K-12, Gifted K-12 and Emotional Disabilities K-12. These programs are designed to prepare personnel to work with individuals eligible for special education services, professionals in school settings and other service provider agencies. Typically, graduates of these programs select careers as special education teachers, administrators, and practitioners at alternate placement agencies that serve individuals with special needs.

**Accreditation**

The Special Education Master's and Specialist's Programs at Jackson State University are accredited by the Council for Accreditation of Educator Preparation (CAEP) and the Southern Association of Colleges and Schools (SACS). Additionally, the program's standards are in compliance with the Council for Exceptional Children (CEC).

**Department of Special Education  
Goals and Objectives**

The mission of the Department of Special Education supports the broad mission of the University. The University's mission involves utilization of its human, cultural and physical resources to enhance the surrounding metropolitan community and urban areas of the state of Mississippi, the nation and the world. The Department of Special Education (DSE) seeks to encourage and facilitate the efforts of candidates to acquire knowledge, skills, understandings, appreciations and attitudes necessary for effective interaction and instruction of individuals with disabilities. The instructional curriculum and learning experiences provide opportunities for candidates to develop competencies and attitudes that promote and actualize excellence in teaching and learning outcomes.

The objectives of the Department of Special Education are:

1. To prepare personnel for staffing special education positions in schools and other related support/related services agencies.
2. To offer candidates a comprehensive curriculum that incorporates a variety of experiences including: campus-based experiences (i.e. microteaching clinics, case studies, computer-assisted instruction) as well as field-based experiences (i.e. internships and tutoring).
3. To facilitate candidates' professional development by broadening their knowledge base as set forth in the curriculum by attending conferences, workshops, seminars and participating in collaborative activities with other community agencies (e.g. public schools, support/related services agencies, and so forth).
4. To enhance candidates' ability to work with culturally, linguistically, and exceptionally distinctive populations through selected research, teaching, and field-based experiences.
5. To accommodate candidates from various ethnic backgrounds and exceptionalities through an open, multicultural approach to special education personnel preparation.

### **Master's Program**

#### **Admission Requirements**

Applicants for the master's degree must hold an undergraduate degree from an accredited college or university, and must be admitted to Jackson State University's Division of Graduate Studies and DSE. A copy of the Graduate catalog can be acquired from the Division of Graduate Studies and online at:

<http://www.jsums.edu/~gadmappl/Catalog/Gradcatalog.html>

Additional DSE requirements for **full** admission to the program include:

1. Submission of an application packet, which includes three (3) letters of recommendation from former collegiate faculty who taught the applicant, a current or former supervisor/administrator, and/or co-worker.
2. Submission of a recent official university transcript.
3. A GPA of 3.00\*.
4. Successful completion of an oral interview with graduate faculty.
5. Submission of an entry professional portfolio.

#### **Admissions Status**

Candidates can be admitted as follows:

1. Applicants successfully meeting the admissions criteria with an undergraduate cumulative grade-point average (GPA) of 3.00 or higher on a 4.00 scale may be admitted with a status determination of Full/Good Standing.
2. Applicants successfully meeting the admissions criteria with an undergraduate cumulative grade-point average (GPA) of 2.50 to 2.99 may be admitted with a status of Provisional/ Conditional Standing.

3. Applicants not meeting the admissions criteria will not be admitted.

All applicants for a Master of Education (M.Ed.) degree program in Special Education must first be admitted to the University by the Division of Graduate Studies.

Applicants must:

1. Secure an admission packet (online) from the Division of Graduate Studies.
2. Submit one official copies of transcripts from all colleges and universities attended.

#### **Departmental Requirements**

The DSE will review the transmittal packet from the Graduate School. Proof of the following additional information must be submitted to the DSE concurrent with the Graduate School online application:

#### **Admissions Criteria**

1. A letter of application to the M.Ed. Special Education Teaching Program faculty that includes an acceptable personal statement of goals for professional development.
2. A copy of baccalaureate degree from an accredited college or university.
3. An "A" teaching certificate. Applicants who do not hold the appropriate credentials or who are not eligible for the appropriate certification must complete the prerequisite teacher certification requirements before continuance of application consideration.
4. Three (3) letters of recommendation written by those familiar with applicant's academic achievement and potential.
5. All required immunizations, specifically, candidate has had two (2) MMRs (Mumps, Measles, Rubella) in his or her lifetime and a Tetanus/Diphtheria immunization within the past two years. For more information, contact Student Health Services at (601) 979-2260.
6. An acceptable writing sample that provides evidence of acquired writing competencies.

#### **Course Requirements**

The curriculum offerings are constantly being revised to meet new standards required by accrediting agencies.

#### **Degree Requirements - Mild/Moderate**

##### **Core Courses**

<b>Course</b>	<b>Title</b>	<b>Hours</b>
EDFL 511	History and Philosophy of Education	3
EDFL 514	Elementary Statistics	3
EDFL 515	Methods of Educational Research	3
EDFL 568	Curriculum Methods	3
<b>Hours</b>		<b>12</b>

##### **Required Concentration Courses**

<b>Course</b>	<b>Title</b>	<b>Hours</b>
SPED 500	Survey of Children and Youth with Exceptionalities	3
SPED 504	Administration and Organizational Procedures for Special Education	3

SPED 507	Advanced Methods in Behavior Management	3
SPED 520	Assistive Technology for Individuals with Disabilities	3
SPED 569	Strategies for Managing Violent and Aggressive Behavior	3
SPED 572	Learning Theories for Special Educators	3
SPED 586	Practicum: Mild-Moderate Disabilities	3
SPED 599	Seminar: Children with Mild-Moderate Disabilities	3
<b>Total Hours</b>		<b>36</b>

Special Education		
SPED 507	Advanced Behavioral Management	3
SPED 528	Educational Assessment	3
SPED 572	Learning Theories for Special Educators	3
SPED 599	Seminar: Children with Mild-Moderate Disabilities	3
<b>Total Hours</b>		<b>18</b>

**Mississippi Add-On Endorsement  
Masters' Level Only**

**Area:** Emotional Disabilities (Code 206)

**Prerequisite**

Must have current Code 221, Mild/Moderate Disability K-12 - Level AA

**AA-Emotional Disability**

<b>Course</b>	<b>Title</b>	<b>Hours</b>
SPED 504	Organizational Procedures in Special Education	3
SPED 507	Advanced Behavioral Management	3
SPED 552	Personality Development of Children with Exceptionalities	3
SPED 569	Strategies for Managing Violent and Aggressive Behavior	3
SPED 572	Learning Theories for Special Educators	3
<b>Total Hours</b>		<b>15</b>

**Mississippi 'A' Add-On Endorsement  
Master's Level Only**

**Area:** Visually Impaired [K-12] (Code 218 ~~VI~~)

**Visually Impaired**

<b>Course</b>	<b>Title</b>	<b>Hours</b>
SPED 508	Educational Management of Children with <del>Physical</del> Visual and Multi-Disabilities	3
SPED 529	Assessment Procedures for Children with Visual Impairments and Multi-Disabilities	3
SPED 540	Introduction to Children with Visual Impairments	3
SPED 541	Methods and Materials in Teaching Children with Visual Impairments	3
SPED 542	Medical and Educational Implications of the Structure and Function of the Eye	3
SPED 543	Introduction to Braille	3
SPED 544	Introduction to Orientation and Mobility	3
<b>Total Hours</b>		<b>21</b>

**Degree Requirements – Visually Impaired**

**Core Courses**

<b>Course</b>	<b>Title</b>	<b>Hours</b>
EDFL 511	History and Philosophy of Education	3
EDFL 514	Elementary Statistics	3
EDFL 515	Methods of Educational Research	3
EDFL 568	Curriculum Methods	3
<b>Hours</b>		<b>12</b>

**Required Concentration Courses**

<b>Course</b>	<b>Title</b>	<b>Hours</b>
SPED 522	Assistive Technology for VI	3
SPED 529	Assessment Procedures for Children with VI and Multiple Disabilities	3
SPED 540	Introduction to Children with Visual Impairments	3
SPED 541	Methods and Materials in Teaching Children with Visual Impairments	3
SPED 542	Medical and Educational Implications of the Structure and Function of the Eye	3
SPED 543	Introduction to Braille	3
SPED 544	Introduction to Orientation and Mobility	3
SPED 545	Advanced Braille	3
SPED 586	Practicum in Special Education	3
<b>Total Hours</b>		<b>39</b>

**Notes:**

1. Matriculation forms must be developed in consultation with the designated department advisor.
2. All students must be approved by the departmental advisor to take the Graduate English Competency Examination (GECE) and the Graduate Area Comprehensive Examination (GACE).

**Mississippi Add-On Endorsement  
Master's Level Only**

**Area:** Mild/Moderate (Code 221)

**Mild/Moderate K-12**

<b>Course</b>	<b>Title</b>	<b>Hours</b>
SPED 500	Survey of Children and Youth with Exceptionalities	3
SPED 504	Organizational Procedures in	3

**Mississippi “AA” Add-On Endorsement  
Master’s Level Only**

**Area:** Gifted [K-12] (Code 207)

**Gifted K-12**

<b>Course</b>	<b>Title</b>	<b>Hours</b>
SPED 504	Organizational Procedures in Special Education	3
SPED 528	Educational Assessment	3
SPED 570	Education and Psychology of Children who are Gifted and Talented	3
SPED 571	Methods and Materials in Teaching Children who are Gifted and Talented	3
SPED 572	Learning Theories for Special Educators	3
<b>Total Hours</b>		<b>15</b>

**Specialist Degree in Education  
Special Education**

Students applying for admission to the Specialist program must obtain general admission to the Division of Graduate Studies; however, this does not guarantee admission to the College of Education Specialist program in the specific area of concentration. Students must also complete an application to the specific department.

**Admission Requirements**

- A master’s degree from an accredited college or university
- An overall GPA of 3.0 or above (on a 4.0 scale) on the master’s degree
- A completed Specialist program application
- Three letters of recommendation
- Acceptable evidence of the applicant’s writing ability as determined by a writing sample completed under the supervision of the screening committee
- A successful interview with the program screening committee
- A recommendation for admission by the screening committee
- Student must hold a valid teaching license
- Deadline for applications for summer/fall admission is January 15th

The Special Education Specialist Program is a 36-semester hour program. All candidates for this degree must have an AA certificate from an accredited institution of higher learning. Approval for a thesis or a project must be granted by a Department Thesis Advisor or a Project Advisor. The Specialist Program is accredited by the Council for Accreditation of Educator Preparation (CAEP). This degree program qualifies a graduate to receive Mississippi AAA Certification (Graduates are capable of leadership roles in school and non-school settings for exceptional learners K-12).

**Course Requirements**

The curriculum offerings in the current catalog meet the new standards required by our accrediting agencies.

<b>Core Courses</b>		
<b>Course</b>	<b>Title</b>	<b>Hours</b>
EDFL 601	Advanced Research and Statistics	3
EDFL 602	Comparative Education	3
EDFL 610	School and Community Relations	3
<b>Total Hours</b>		<b>9</b>
<b>Specialization</b>		
SPED 600	Children and Youth	3
SPED 601	Guidance for Exceptional Behavioral Management Approaches for Children with Exceptionalities	3
SPED 602	Cognitive Processes and Children with Exceptionalities	3
SPED 603	Psychoeducational Aspects of Children with Exceptionalities	3
SPED 604	Administration and Supervision in Special Education	3
SPED 606	Consulting/ Itinerant and Resource Teaching in Special Education	3
SPED 679	Individual Research	3
SPED 686	Practicum in Special Education	3
SPED 699	Seminar in Special Education	3
<b>Total Hours</b>		<b>36</b>

**Notes**

1. Required forms must be developed in consultation with the designated department advisor.
2. All students must be approved by the departmental advisor to take the Graduate English Competency Examination and Graduate Area Comprehensive Examination.

**DESCRIPTION OF COURSES**

**SPED 500 Survey of Children and Youth with Exceptionalities.** (3 Hours) A study of definitions, characteristics, educational programs and problems of exceptional individuals.

**SPED 503 Teaching Children with Severe and Profound Disabilities.** (3 Hours) Provides students with the skills and understanding needed to teach students with severe and profound disabilities; program needs, services, and an overview of the role of persons with severe and profound disabilities in society are studied.

**SPED 504 Administrative and Organizational Procedures for Special Education.** (3 Hours) A study of administrative and organizational structures, programmatic procedures, policies, resources, and guidelines essential to the delivery of educational services for exceptional learners.

**Management.** (3 Hours) Emphasis will be placed on current techniques, educational strategies and tools that



will aid the teacher in understanding and handling behavior problems in the classroom.

**SPED 508 Educational Management of Students with Visual and Multiple Disabilities (3)** Emphasis will be placed upon techniques, educational strategies, and tools that will aid the teacher in (1) understanding and addressing behavior and related problems of students with visual and multiple disabilities and (2) understanding issues related to the influences of additional disabilities on students who are visually impaired.

**SPED 516 Career Education for Children with Exceptionalities (3 Hours)** Dissemination of information about daily living skills, personal social skills, and occupational guidance and preparation in the career development of individuals with exceptionalities.

**SPED 520 Assistive Technology For Individuals With Disabilities. (3 Hours).** A survey of technological devices, legislation and issues related to assistive technology. Hands-on experiences with devices and software that facilitate new ways of teaching individuals with disabilities are provided.

**SPED 522 Assistive Technology for Visual Impairments. (3 Hours).** A survey of technological devices, legislation and issues related to assistive technology. Hands-on experiences with devices and software that facilitate new ways of teaching individuals with disabilities are provided.

**SPED 528 Advanced Educational Assessment and Prescriptive Planning In Special Education. (3 Hours)** Special diagnostic procedures for exceptional learners; implications for prescriptive planning.

**SPED 529 Assessment Procedures for Children with Visual Impairments and Multi-Disabilities (3)** Introduction to the concepts, issues, instruments and procedures involved in the assessment of children and adolescents with visual impairments.

**SPED 530 Education and Psychology of Children with Intellectual Disabilities. (3 Hours)** Medical, behavioral, biological, emotional and social factors that impact children with Intellectual Disabilities will be studied.

**SPED 532 Education and Psychology of Children with Learning Disabilities. (3 Hours)** A survey of the historical development of learning disabilities, problems of definition and classification, screening and diagnosis and instructional systems will be studied.

**SPED 540 Introduction to Children with Visual Impairments (3)** An introductory course providing a comprehensive life-span overview of the field of visual impairments. Examines the legal, demographic, historical, and psychosocial perspectives, as well as the various services and programs available. Through demonstration, simulation, and practical experiences, students will be exposed to a variety of adaptive skills, techniques, and devices used by persons with visual impairments.

**SPED 541 Methods and Materials in Teaching Children with Visual Impairments (3)** Students will design appropriate educational environments, plan instructional programs for students with low vision, which will include: functional vision assessment, Braille literacy, learning media assessments, instructional strategies for activities of daily living, concept development, social skills, and subject content.

**SPED 542 Medical and Educational Implications of the Structure and Function of the Eye (3)** This course provides an overview of normal and abnormal

development of the human eye. Included are topics of ocular anatomy and physiology; pathological conditions affecting the human eye, and clinical and functional vision assessments. A strong component of low vision is provided within this course, which includes functional vision assessments, environmental vision assessments, optics, the use of optical devices, and the principles of optimizing visual efficiency.

**SPED 543 Introduction to Braille and Other Technology (3)** Emphasis will be placed on technologies, educational strategies, and tools that will aid the teacher in (1) understanding and addressing behavior and related problems of students with visual and multiple disabilities and (2) understanding issues related to the influence of additional disabilities of students who have visual impairments.

**SPED 544 Introduction to Orientation and Mobility (3)** This course is designed to give practical applications of orientation and mobility techniques to be used by teachers of students who are blind and have visual impairments. This class will offer instruction and experiences through supervised activities in indoor and commercial environments; includes special travel situations, shopping malls, and in store travel. **SPED 545 Advanced Braille (3)** Course is designed to amplify basic knowledge and proficiency of Braille. An in depth study of tools and teaching strategies used in mathematics to include the Nemeth Code, Scientific Notebook software and the abacus will be taught to include a review of the Unified English Braille code.

**550 Education and Psychology of Children with Behavioral Disorders. (3 Hours)** Course includes characteristics, causes and problems of behavioral disorders in children and youth; diagnosis, placement and in-depth study of educational programs

**SPED 552 Personality Development of Children with Exceptionalities. (3 Hours)** Course designed to enhance knowledge related to the personality development of children with exceptionalities; various theories of personality problems related to personality will be studied.

**SPED 569 Strategies For Managing Violent and Aggressive Behaviors. (3 Hours).** Emphasizes prevention and crisis management models, verbal intervention and personal safety skills applicable with verbally aggressive and physically violent behavior will be studied.

**SPED 570 Education and Psychology of Students who are Gifted and Talented. (3 Hours)** Course covers characteristics of youth with potential superior performance in areas of academics, creativity, and talent. Emphasis is placed on recent trends in school, home and community planning for students who are gifted and talented. Students who are gifted and talented from culturally diverse backgrounds will also be studied.

**SPED 571 Methods and Materials in Teaching students who are Gifted and Talented. (3 Hours)** Emphasis is placed on innovative techniques and models appropriate for teaching students who are gifted and talented.

**SPED 572 Learning Theories for Special Educators. (3 Hours)** This course is designed to provide educators with an advanced understanding of selected theories of learning, curriculum strategies and materials that facilitate learning in children with exceptionalities.

**SPED 579 Research and Independent Study. (1-3 Hours)** Prerequisite: Adviser permission.

Implementation of individual student research project under guidance of an adviser. (Prerequisites: Must have advisor approval.)

**SPED 586 Practicum in Special Education.** (3 Hours) Supervised practicum; application of methods and techniques appropriate for various exceptionalities.

**SPED 599 Seminar in Special Education.** (3 Hours) Current problems, issues, and trends in the field of special education.

**SPED 600 Guidance for Exceptional Children and Youth.** (3 Hours) Study of the personal, social, educational, and vocational adjustment of children and youth with exceptionalities.

**SPED 601 Behavior Management Approaches with Exceptional Children and Youth.** (3 Hours) Classroom application of strategies for managing behavioral problems in the school. Emphasis placed on research in classroom behavior modification.

**SPED 602 Cognitive Processes and Exceptional Children.** (3 Hours) Study of the cognitive development of children with exceptionalities.

**SPED 603 Psychoeducational Evaluation of Exceptional Children.** (3 Hours) Procedures in assessing children and youth with exceptionalities. Special attention given to interpretation and application of diagnostic instruments for the purpose of planning prescriptive programs.

**SPED 604 Administration and Supervision in Special Education.** (3 Hours) Analysis of organizational and administrative principles and practices for diverse programs in special education.

**SPED 606 Consulting/Itinerant, and Resource Teaching In Special Education.** (3 Hours) Role responsibilities and problems of consulting, itinerant, and resource teachers in special education.

**SPED 679 Individual Research.** (1-3 Hours) Special attention given to design, application, and evaluation of student research projects (to be conducted under the supervision of an adviser). (Prerequisites: Permission of Advisor, Pass English Competency Examination, Pass Area Comprehensive Examination)

**SPED 686 Practicum in Special Education.** (3-6 Hours) Supervised practicum; application of methods and techniques appropriate to various exceptionalities. (Assignments are made according to area (s) of specialization).

**SPED 699 Seminar in Special Education.** (3 Hours) Intensive study and analysis of contemporary issues and trends in the area of special education with implications for curriculum planning and teaching methodology. (Assignments are made according to area (s) of specialization)

**SPED 701 Assessment of Special Populations.** (3 Hours) Interpretation of test data to be used in remedial planning for individuals in special education programs.

**SPED 706 Medical Aspects of Developmental Disabilities.** (3 Hours) A study of definitions, classifications, characteristics, evaluations, diagnosis, and treatments of medical conditions of individuals with exceptionalities.

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## DEPARTMENT OF ELEMENTARY AND EARLY CHILDHOOD EDUCATION

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Dr. Tracy Harris, Associate Professor and Interim Chair  
P.O. Box 18380  
Telephone: (601) 979-2341  
email: Tracy.L.Harris@jsums.edu

### Faculty

Dr. W. Brown, Assistant Professor  
Dr. K. Bryant, Associate Professor  
Dr. S. Davidson, Associate Professor  
Dr. A. Haralson, Associate Professor  
Dr. T. Harris, Associate Professor  
Dr. E. Kincaid, Associate Professor  
Dr. T. Latiker, Associate Professor  
Dr. J. Yin, Professor

The Department of Elementary and Early Childhood Education offers graduate programs leading to the Master of Science in Education Degree in Early Childhood Education, Reading Education, and Elementary Education; and the Doctor of Education Degree in Early Childhood Education.

### Departmental Objectives

The department and its programs exist to prepare professional instructional personnel at levels appropriate to the degrees offered, and to meet certification requirements at AA, AAA, and AAAA levels for the State of Mississippi in various fields. The department's intention is to prepare candidates who:

1. Demonstrate sensitivity to the emerging knowledge bases and understand how they impact education and the need for change;
2. Adjust methods, curriculum and service approaches to meet the needs of diverse learners;
3. Demonstrate a repertoire of education related strategies and skills which enable them to share knowledge effectively;
4. Demonstrate critical thinking competence and effective communication skills in various forms and media;
5. Ensure that established standards for successful learner outcomes are met;
6. Possess the ability to work successfully with learners, teachers, college faculty, and others;
7. Demonstrate knowledge of and skill in applying basic principles undergirding the selection and utilization of methods, techniques and devices which facilitate effective program development using various educational models;
8. Can locate, interpret and apply research pertinent to educational problems;
9. Exhibit competency in doing independent, original research;
10. Are able to identify, interpret and promote the functions of education in a democracy;
11. Are skilled in the techniques of instruction and ensure that pupils will derive the greatest benefits from classroom experiences;
12. Serve as facilitators for the total process of growth and learning;

13. Develop competencies and professional leadership skills through the advancement of knowledge and research that will enable them to assume major leadership roles in diverse communities.

### Department of Early Childhood and Elementary Education Objectives

The major objectives are to produce educators who:

1. Are competent teachers in the fields of Early Childhood Education, Reading Education, and Elementary Education;
2. Are prepared for professional careers in preschools, kindergartens, and elementary schools;
3. View the profession of education as being influential in the advancement of humankind;
4. Are compassionate, understanding, and have as their primary goal to help children and youth develop into citizens who will promote human advancement.

### Master of Science in Education Program Objectives

The master level programs in Elementary and Early Childhood Education, and Reading Education allow students to develop a mastery of structure, skills, concepts, ideas, values, facts, and methods of inquiry in their field of specialization. All programs are aligned with standards of specialized professional association and include academic, methodological, and clinical knowledge necessary for professional competence in the field. Through the program, the student will develop competencies in the following:

1. Child development from birth to early adolescence with emphasis on the implications of the reading and learning processes.
2. Psychological and sociological concepts and generalizations dealing with the development of self-concept, group responsibility and relationships and reading ability.
3. Conduct action research projects designed to develop skills in observing, recording, and assessing children's behavior in order to plan an appropriate instructional program and learning environment.
4. Design, implement, and evaluate curricula in the discipline, which provide content knowledge needed to teach listening, speaking, writing, and reading with an emphasis on language development; mathematics; physical sciences and health; social studies; and fine arts.
5. Evaluate instructional methodologies for organizing, planning, and implementing physical education activities and safety practices.
6. Research and evaluate current instructional approaches for enabling children to express themselves creatively in a variety of ways including the arts and communication skills.
7. Research and evaluate current instructional approaches for enhancing the critical thinking/reading ability of the learning in any content area.
8. Research and evaluate current instructional approaches for developing competence in facilitating independent learning and

decision-making skills in young children and early adolescence.

9. Conduct ethnological studies to examine characteristics of different learning environments appropriate for children from infancy through early adolescence.
10. Demonstrate skills in the use of state and local resources and appropriate referral strategies.
11. Design, implement, and evaluate appropriate curricula experiences working with parents and other adults in the home, school and community.
12. Develop and evaluate administrative plans for the organization and administration of the pre-kindergarten program.
13. Conduct diagnostic-prescriptive teaching.

### Master of Science in Elementary Education

#### Admission Requirements

- Applicants must hold a baccalaureate degree from an accredited college or university.
- Proof that the candidate holds a current class 'A' Educator's License or is seeking renewal of the license through attaining college credit hours as deemed necessary by the Mississippi State Department of Education (Copy of class 'A' Educator's License).

#### Degree Requirements

In addition to the specific degree requirements of the Division of Graduate Studies; the student must successfully complete a minimum of 36 semester hours.

Note: A student may transfer up to twelve (12) quarter or nine (9) semester hours earned at an accredited college or university.

#### Core Requirement

Course	Title	Hours
EDFL 511	History and Philosophy of Education	3
EDFL 514	Elementary Statistics	3
EDFL 515	Methods of Educational Research Elementary	3
EDFL 568	Curriculum Methods, or	3
EDCI 568	Seminar in Elementary Curriculum	3

#### Specialization Courses

RE 552	Recent Methods and Materials for Teaching Elementary Literacy	3
EDCI 557	Problems and Issues in Social Studies	3
EDCI 563	Problems and Issues in Science	3
EDCI 564	Current Trends in Elementary School Mathematics	3
EDCI 551	Career Education	3

**Suggested Electives:**

EDCI 503	Seminar in Child Development	3
EDCI 504	Methods and Materials in Early Childhood Education	3
EDCI 508	Children's Literature	3
EDCI 590	Thesis project	3-6

**Master of Science in Early Childhood Education****Admission Requirements**

Applicants must hold a baccalaureate degree from an accredited college or university.

**Degree Requirements**

In addition to the specific degree requirements of the Division of Graduate Studies; students must successfully complete a minimum of 36 semester hours. Note: A student may transfer up to twelve (12) quarter or nine (9) semester hours, not to exceed 8 years, earned at an accredited college or university.

**Core Requirements**

Course	Title	Hours
EDFL 511	History and Philosophy of Education	3
EDFL 514	Elementary Statistics	3
EDFL 515	Methods of Educational Research Elementary	3
EDCI 569	The Developmentally Appropriate Early Childhood Curriculum	3

**Concentration Courses in Early Childhood Education**

EDCI 501	The Family in the Cross Cultural Perspective	3
EDCI 502	Literacy Development and the Young Child	3
EDCI 503	Seminar in Child Development	3
EDCI 504	Methods and Materials for Teaching Young Children	3
EDCI 505	Assessing the Young Child	3
EDCI 507	Organization and Administration of Early Childhood Education Programs	3
EDCI 508	Literature for Young Adults	3

EDCI 509 Practicum in Early Childhood Education 3

**Master of Science in Reading Education****Program Objectives:**

- To develop candidates who understand the research bases for implementing evidence-based practices in literacy instruction

- To prepare candidates to utilize diagnostic-prescriptive strategies of intervention for struggling readers and writers
- To instruct candidates to disseminate research and information concerning reading to guide their research endeavors
- To guide candidates as they integrate Internet technologies into classroom lessons to insure students will be prepared for the technology and literacy futures they deserve
- To instruct candidates in how to use literacy to celebrate the diverse cultures that increasingly defines our population
- To equip candidates with leadership in literacy skills

**Admission Requirements:**

Each candidate must also complete an admission packet from the Department of Elementary and Early Childhood Education. The admission packet includes, but is not limited to the following requirements:

- Proof of a Baccalaureate degree of Education from an accredited university or college with a minimum undergraduate cumulative GPA of 2.5 for conditional admission.
- Proof from ETS showing passing scores on both parts of PRAXIS II (Curriculum and Instruction and also the PLT)
- Proof that the candidate holds a current class 'A' Educator's License or is seeking renewal of the license through attaining college credit hours as deemed necessary by the Mississippi State Department of Education (Copy of class 'A' Educator's License).
- Complete an acceptable writing sample and interview process with departmental faculty.

**Degree Requirements:**

The Master of Reading Education course work includes the following requirements:

- Nine (9) semester hours of core coursework in statistics and curriculum methods
- Twenty-four (24) semester hours of specialized content
- Six (6) hours of clinical and practical experiences
- Coursework must be completed in the prescribed sequence.
- Throughout the course of study, eight (8) major assessments must be successfully completed according to the International Reading Association's established criteria.
- Any candidate scoring below 150 on the PRAXIS II Reading Specialist (5301) is required to complete the EDCI 565 course the following semester. The PRAXIS Reading Specialist Exam must be passed before the degree may be conferred.

## Core Requirements

### Reading, Research and Foundations:

Course	Title	Hours
EDFL 514	Elementary Statistics	3
EDFL 515	Methods of Educational Research	3
RE 506	Foundation of Reading	3

### Specialization Courses

RE 502	Workshop: Current Problems and Issues in Literacy Instruction	3
RE 503	Theory and Research in Teaching Literacy	3
RE 510	Teaching Literacy Skills in the Content Areas	3
RE 512	Using Literature to Teach Literacy Skills	3
RE 550	Psychology of Literacy Instruction	3
RE 552	Methods and Materials for Teaching Elementary Literacy Skills	3
RE 556	Supervised Practicum in Literacy I	3
RE 557	Supervised Practicum in Literacy II	3
RE 559	Leadership in Literacy	3
*EDCI 565	Integrative Studies for Elementary School	3

## Doctor of Education Early Childhood Education

### Accreditation

The doctor of education in early childhood education program is aligned with standards and professional accreditation recommendations of the Council for the Accreditation of Educator Preparation (CAEP), Southern Association of Colleges and Schools Commission on Colleges (SACSCOC), and the National Association for Education of Young Children (NAEYC).

Students complete the following course of study in consultation with their faculty advisors.

### Program Objectives

The focus of the doctoral program is on the study of early childhood education and its practice, including aspects of child development, pedagogy, curriculum, policy analysis, history and philosophy, and basic and applied research. The primary outcome for the doctoral candidate is to become a leader for the field who influences the practice of early childhood education through the generation of knowledge; the education of early childhood professionals; the conduct of research on young children's development and learning; the development implementation, and evaluation of curriculum; administration of early childhood programs and services at the local, state, and national levels; and the analysis and generation of public policy related to early childhood education.

Doctoral candidates are expected to demonstrate the following competencies:

1. Knowledge and understanding of the dominant theories of human and sociocultural development and learning through the life span; knowledge of research on social, emotional, cognitive, language, aesthetic, motor, and perceptual development and learning in children from birth through age eight (8) including children with special developmental and learning needs and their families; and an understanding of the child in the family and cultural context.
2. Knowledge and understanding of theories and content of curriculum and instruction and alternative models and methodologies.
3. Knowledge of the alternative perspectives regarding central issues in the field (for example, child development, programs for young children and their families, research priorities, or implications for teacher education and staff development).
4. Knowledge and ability to use and develop a variety of procedures for assessment of child development and learning, child care and early education environments, and early childhood education curricula; and understanding of types, purposes and appropriateness of various assessment procedures and instruments.
5. Knowledge of developing and evaluating programs for children from a variety of diverse cultural and language backgrounds, as well as children of different age and developmental levels, including children with disabilities, children with developmental delays, children who are at risk for developmental delays, and children with special abilities.
6. Apply interdisciplinary knowledge from such fields as sociology, psychology, health services, special education, history, philosophy, and to practice in early childhood.
7. Knowledge in reflective inquiry and demonstrate professional self-knowledge, for example by collecting data about one's own practice and articulating a personal code of professional ethics.
8. Knowledge of the ability to work collaboratively as a member of a team with colleagues and other professionals to achieve goals for children and families.
9. Knowledge and skills required to serve as a mentor to others and a model of professional behavior for volunteers and other staff members.
10. Knowledge of understanding the socio-cultural, historical, and political forces that influence the diverse delivery systems through which programs are offered for young children and their families (for example, social service agencies, public schools, private enterprise).
11. Collection of and interpretation of research, translate research findings into practice, demonstrate personal research skills, and implement applied research.
12. Knowledge of deeper understanding of a particular area of specialization related to an intended career role (for example,

administration and supervision of early childhood programs; family support programs; primary grade teaching or administration; early childhood special education/early intervention; or infant/toddler programming).

13. Knowledge of applying theoretical and research knowledge to practice in early childhood settings (their own classroom or other field assignments). For example, applications of theory to practice may be demonstrated during field study projects, action research, curriculum projects, or observed clinical practice.
14. Knowledge to enable reflective professionals to take leadership roles in schools or programs, mentor novice teachers, and act as advocates for children at local, state, and national levels.
15. Knowledge of the diversity of delivery systems through which programs are offered for young children and their families (for example, social service agencies, public schools, private enterprise) and become advocates for providing families with coordinated, quality services that are accessible and affordable. Doctoral candidates demonstrate understanding of the implications of contrasting missions, mores, resources, constraints and potential of each system for preparing personnel to work in those settings.
16. Knowledge of research methods and findings, and the ability to translate research findings into practice, demonstrate personal research skills and the ability to develop and implement applied research, and the disposition to create and disseminate new knowledge.
17. Deeper knowledge and exemplary practice in at least one area of specialization (for example, Teacher education, assessment and evaluation, early childhood special education/early intervention literacy, bilingual education, or curriculum theory and development).
18. Experience in several types of leadership roles depending on their prior presentation and experience and career objectives. Leadership capabilities may be demonstrated in the areas of: observation and supervision of student teachers and interns; teaching of undergraduate college students; administration of early childhood programs; advocacy and public policy activity; and/or basic or applied research in early childhood education.
19. Theoretical knowledge in education and allied disciplines.
20. Knowledge to interpret and expand the knowledge base by completing a dissertation that involves basic or applied research and study.

## Doctor of Education Early Childhood Education

### Admission Requirements

Applicants to the Doctor of Education program must meet the following criteria for admission:

1. Admitted to or eligible for admission to the Division of Graduate Studies.
2. A Master's degree from an accredited University.
3. A completed program application.
4. A cumulative GPA of 3.0 or above (on a 4.0 scale) on the last earned degree.
5. Provide transcripts for all post secondary work attempted prior to submitting a program application.
6. Acceptable evidence of a student's writing ability as determined by a writing sample completed under the supervision of a designated member(s) of the Screening Committee
7. Letters of recommendations from three persons knowledgeable of the applicant's professional and academic ability, experiences and/or leadership potential such as previous professors, principals; supervisors, or superintendent.
8. An official copy of the Graduate Record Examination Score or Miller Analogies Test taken within the last 5 years.
9. A portfolio documenting strengths such as teaching, publications, professional presentations, educational awards and community service.
10. A successful interview with the Program Screening Committee.
11. A vita to include education, experience, honors, and professional affiliations.

\*The admission criteria for this program are based on minimum standards and a recommendation by the Screening Committee, but satisfying minimum criteria does not guarantee admission in the program.

### Core Courses\*

Course	Title	Hours
EDCI 703	Seminar I: Urban Studies in Early Childhood Education	3
EDCI 712	Models of Curriculum Development in Early Childhood Education	3
EDCI 713	Instructional Theories and Design in Early Childhood Education	3
EDCI 716	Learning Theories and Styles in Early Childhood Education	3
<b>Hours</b>		<b>12</b>

### Research and Major Requirements\*

EDAD 710	Advanced Statistical Concepts & Computer Analysis	3
EDFL 732	Advanced Research and Non-Parametric Statistical Methods	3
EDFL 797	Research Design	3

EDCI 714	Organization and Administration of Early Childhood Education Programs	3
EDCI 715	Seminar II: Urban Studies in Early Childhood Education	3
EDCI 717	Psychology of Young Children in Urban Environments	3
EDCI 718	Seminar III: Urban Studies in Early Childhood Education	3
EDCI 720	Research Applications in (Science, Mathematics, or Special Education) for Early Childhood Education	3
EDCI 788	Teaching Education Programs and Technology	3
EDCI 798	Internship/Field Studies Doctoral	5
	<b>Hours</b>	<b>32</b>
<b>Cognate Areas*</b> Health, Guidance, Natural Sciences and Mathematics, Special Education, Global Education, Educational Technology and Reading		
		<b>Hours 12</b>
EDCI 799	Dissertation*	<b>Hours 9-15</b>
	<i>Total hours**</i>	Minimum of <b>65</b>

\*Prerequisite: Admission to The Urban Interdisciplinary Education Curriculum Program for the Doctorate in Early Childhood Education.  
 \*\*Excluding Prerequisite courses for Non Early Childhood Education applicants

## DESCRIPTION OF COURSES

**EDCI 500 Introduction to Teaching Internship.** (6 Hours) An exploration of the teaching profession to include historical perspectives, current issues and practices, influences of legislation and future projections. Through the field-based mentorship component of the course, students will have the opportunity to test theories of teaching and learning, to plan and guide learning experiences for elementary and secondary learners, and to analyze functions of different levels of schools.

**EDCI 501 Parenting Roles in Early Childhood Education.** (3 Hours) An investigation of the theories concerning parent-teacher-child intrapersonal and interpersonal relationships to give a broader understanding of diverse families from different socioeconomic levels, nationalities, and ethnic backgrounds. Requires 10 hours of field-based experiences.

**EDCI 502 Literacy Development and the Young Child** (3 hours) An investigation of the techniques used to help young children use language skillfully, to listen, speak, read, and write. Requires 10 hours of field based experiences.

**EDCI 503 Principles of Child Development in Early Years.** (3 Hours) An investigation of the methods and research in child growth in social, emotional, psychological and physiological development of children from birth through eight years of age. Requires ten (10) hours of clinical and field-based experiences.

**EDCI 504 Methods and Materials In Early Childhood Education.** (3 Hours) A critical analysis of methods and materials for teachers working with children in nursery schools, day-care centers, kindergarten and primary grades. Requires fifteen (15) hours of clinical and field-based experiences.

**EDCI 505 Assessing the Young Child.** (3 Hours) An investigation of the theories and developmentally appropriate practices relative to group and individual evaluation procedures for early childhood education. Requires ten (10) hours of clinical and field-based experiences.

**EDCI 506 The Role of Play in the Education of Young Children.** (3 Hours) An investigation of the theories and research related to the role of play in early childhood education with emphasis on creative thinking and its relationship to physical, emotional, social and intellectual growth. Requires 10 hours of field-based experiences.

**EDCI 507 Organization and Administration of Early Childhood Programs.** (3 Hours) An investigation of the theories and developmentally appropriate practice for the organization, supervision, and program management of programs for young children from infant through eight years of age. Requires ten (10) hours of clinical and field-based experiences.

**EDCI 508 Children's Literature.** (3 Hours) This course is designed to provide a comprehensive study of children's literature selected from the preschool level through junior high school level, with emphasis on book selection, historical perspectives, types of literature, and creative ways to use books with children.

**EDCI 509 Practicum in Early Childhood Education** (3 hours) An investigation of early childhood philosophy, practice, and theory through research and hands-on experience in childcare settings. Requires 30 hours of field-based experiences.

**EDCI 551 Career Education.** (3 Hours) A survey of career education models and educational models in educational and vocational settings with a view toward designing career education programs for specific situations. Requires fifteen (15) hours of clinical and field-based experiences.

**EDCI 556 Special Topics In Early Childhood/Elementary Education.** (1-6 Hours) This course deals with topics which may be treated more effectively as a mini-course, institute, or as a workshop instead of as a regular scheduled course.

**EDCI 557 Problems and Issues in Social Studies Instruction in the Elementary School.** (3 Hours) This course emphasizes methods and materials utilized in teaching social studies in the elementary grades. Special attention is given to the importance of multicultural education, citizen action, valuing, the spiral curriculum and Bloom's Taxonomy of Educational Objectives. Requires ten (10) hours of clinical and field-based experiences.

**EDCI 563 Problems and Issues In Science.** (3 Hours) Content in elementary science; aims and methods of instruction; newer curricular developments; the identification of and planning for solutions to science problems in the elementary school. Materials and media for instruction, and evaluating pupil progress will be

studied. Requires ten hours of clinical and field-based experiences.

**EDCI 564 Current Trends In Elementary School Mathematics.** (3 Hours) This course will address relevant research, contemporary mathematics curriculum content and methodology, relationship between mathematics and other subject areas, improvement of skills and concepts, and the major historical, philosophical, and psychological antecedents of today's elementary school mathematics curriculum. Requires ten hours of clinical and field-based experiences.

**EDCI 565 Integrative Studies for the Elementary School.** (3 Hours) An examination of psychological and other principles underlying the teaching of reading and the application of these principles in planning, conducting, and assessing reading experiences for different aged learners in content areas.

**EDCI 568 Seminar In Elementary Curriculum: Modern Trends and Research.** (3 Hours) Intensive analysis of the research on educational content and methodology of the elementary school curriculum: Consideration given to factors influencing curriculum development.

**EDCI 569 The Developmentally Appropriate Early Childhood Curriculum** (3 hours) An investigation of developmental theories designed to help present and future kinds of curriculum Experiences that are appropriate for bridging and making transitions from one stage into another. Requires 10 hours of field-based experiences.

**EDCI 587 Research and Independent Study in Education.** (3 Hours) Opportunity for students to undertake independent study and research under the direction of a faculty member; the student will submit a written report and may be asked to stand a comprehensive examination on his work. Requires twenty-five hours of clinical and field-based experiences.

**EDCI 588 Education for Developing Areas.** (3 Hours) Prerequisite: Consent of instructor. Research seminar of case studies of educational innovations in technically underdeveloped areas of the world.

**EDCI 589 Teacher Education Programs and Technology.** (3 Hours) Current development in college programs for the preparation of teachers for elementary and secondary schools; analysis of technological developments in teacher education - simulation situations, video tapes and film feedback, models of teaching, interaction analysis and micro-teaching systems in teacher education.

**EDCI 590 Thesis.** (3 Hours) Candidates for the Master of Science Degree in Education may choose to present a thesis embodying the results of their research; approval of the candidate's problem by his adviser is required.

**EDCI 591 Observation and Supervised Field Work In Early Childhood Education.** (9 Hours) Students who have not had 402E or the equivalent will be required to have actual teaching experience under supervision in off-campus kindergarten, nursery or elementary schools, or in the Jackson State University Early Childhood Center. Concurrent conferences will be scheduled as needed. (Required for students who have not had Education 402 EC or 402E-Directed Teaching.)

**EDCI 592 Seminar In Supervision of Student Teaching.** (3 Hours) Prerequisite: Approval of instructor. Designed to assist supervising teachers in

guidance of student teachers. In addition to rationale, and dominant ideas in the literature of supervision. The following topics will be studied: trends in teacher education, orientation of student teachers to student teaching, responsibilities of the supervising teacher and college personnel conference with student teachers and evaluation of student teaching.

**EDCI 600 History and Development of Early Childhood Education.** (3 Hours) Explores the historical development, theory, and contemporary influences upon early childhood education.

**EDCI 601 Methods of Child Study.** (3 Hours) Students will be introduced to diagnostic prescriptive concepts through the utilization of a variety of educational diagnostic instruments in the assessment of children's learning. Requires ten (10) hours of clinical and field-based experiences.

**EDCI 602 Advanced Seminar and Research In Early Childhood Education.** (3 Hours) This course is designed to provide a penetrating view of the early and contemporary scientific and ecological research currently shaping behaviors among children, parents, teachers and administrators during the early childhood years Notable researchers and theorists are studied through primary sources and computer searches. Requires ten (10) hours of clinical and field-based experiences.

**EDCI 603 Education for Parenting.** (3 Hours) Provides a comprehensive examination of the theory and research in the parenting process. Requires fifteen (15) hours of clinical and field-based experiences.

**EDCI 604 Advanced Developmental Psychology.** (3 Hours) This course is specifically designed to address the broad areas of social and cognitive development of normal children. This focus will necessarily explore the interrelationships of cognitive and affective development. The course is thus composed of two components with five modules each. These modules include (1) early experiences, (2) the evolving self, (3) global theoretical perspectives on development, (4) early socialization outcomes, and (5) cross-cultural perspectives.

**EDCI 621 Advanced Seminar In Elementary Education.** (3 Hours) To assist students and in-service teachers in solving classroom problems. Requires ten (10) hours of clinical and field-based experiences.

**EDCI 668 Practicum In Early Childhood Education.** (3 Hours) This course of study is concerned with specific practices and research investigations relative to curriculum planning, administration, and supervision within early childhood laboratories Observations and participation within the existing campus kindergarten program, including pupil contact and limited research activities, are required.

**EDCI 687 Advanced Research and Independent Study.** (1-4 Hours) Supervised exploration of special topics. Requires forty-five (45) hours of clinical and field-based experiences.

**EDCI 689 Behavioral Management in the Elementary School.** (3 Hours) This course is designed to provide a comprehensive study of classroom management with emphasis on behavioral modification tactics, classroom arrangement tactics and curriculum designs that enhance the learning environment. Requires ten (10) hours of clinical and field-based experiences.

**EDCI 703 Seminar I. Urban Studies in Early Childhood Education.** (3 Hours) This course is an introductory course in the Urban Education Curriculum



Development Program for the Doctoral Degree in Early Childhood Education. The course content consists of five introduction, modules: (1) Urban studies in Early Childhood Education, (2) Early Childhood Education, (3) Natural Science/Computer Sciences for Early Childhood Education, (4) Special Education for Early Childhood Education, and Global/international Studies for Early Childhood Education. Requires ten (10) hours of clinical and field-based experiences.

**EDCI 712 Models of Curriculum Development in Early Childhood.** (3 Hours) Emphasis is placed on trends in the various subject matter areas of early childhood curriculum. Contemporary, social issues of potential impact on the early childhood curriculum are included. Models of curriculum development, implementation, and evaluation are studied. Requires ten (10) hours of clinical and field-based experiences.

**EDCI 713 Instructional Theory and Design.** (3 Hours) Study of alternative models of teaching including cooperative learning, inductive thinking, concept development, cognitive growth, nondirective teaching, contingency management, inquiry training, and whole-class instruction. The student is involved in the development, execution, and evaluation of instruction. Works of theorists who have provided the impetus for the development of instructional systems are reviewed. Requires thirty (30) hours of clinical and field-based experiences.

**EDCI 714 Organization and Administration of Early Childhood Education Programs.** (3 Hours) This course is designed mainly for directors, administrators, and supervisors of programs for young children (nursery-kindergarten through grades 3). Requires ten (10) hours of clinical and field-based experiences.

**EDCI 715 Seminar II. Urban Studies in Early Childhood Education.** (3 Hours) Survey of research comparison and evaluation of programs, design and development of projects in current issues through individual study. Intensive examination of a particular area of urban/global studies in early childhood education. In-depth study of research problem in education. Student must be able to demonstrate critical and analytical skills in dealing with a problem in early childhood education. Introductory examination of issues, trends, topics and activities in urban/global studies in early childhood. Requires ten (10) hours of clinical and field-based experiences.

**EDCI 716 Learning Theories and Styles in Early Childhood Education.** (3 Hours) Study of contemporary, learning theories and individual learning styles in the context of early childhood curriculum, planning and implementation. Requires ten (10) hours of clinical and field-based experiences.

**EDCI 717 Psychology of Young Children in Urban Environment.** (3 Hours) Designed to prepare graduate students to teach young children who come from urban and/or culturally different backgrounds. Through use of multimedia source materials, students gain knowledge of background and culture of culturally different learner, determine role of teacher, explore techniques of discipline and classroom management, Survey motivational and instructional techniques and examine, prepare and adapt a variety of instructional materials for individual, small group and large group instruction. Requires ten (10) hours of clinical and field-based experiences.

**EDCI 718 Seminar III: Urban Studies in Early Childhood Education.** (3 Hours) Opportunity for students to investigate problems and issues related to

Early Childhood Education and to develop ability to clarify research problems, review and analyze secondary data. Students select an interest area and complete activities that culminate in a major paper as foundation for their dissertation. (Prerequisite: Admission into the 1994 ECED Pilot Project) Requires ten (10) hours of clinical and field-based experiences.

**EDCI 720 Research Applications in (Science, Mathematics, or Special Education) for Early Childhood Education.** (3 Hours) In-depth, advanced study of the application of theoretical knowledge and principles in science, mathematics, or special education to the development of a theoretical framework, problem identification, data collection/ analysis procedures in early childhood education.

**EDCI 788 Teaching Education Programs and Technology.** (3 Hours) Current development in college programs for the preparation of teachers for elementary and secondary school; analysis of technological development in teacher education- simulation situations, video tapes and film feedback, models of teaching, interaction analysis and microteaching systems in teacher education. Requires ten (10) hours of clinical and field-based experiences.

**EDCI 798 Internship and Field Studies Doctoral.** (5 Hours) Prerequisites: Permission of advisor and director of field experience. Intensive job-related experience pertinent to students' needs. Student must be able to demonstrate skills and leadership abilities in an on-the-job situation. A topic of current interest and need will be emphasized. The student will develop extended competence with contemporary measurement and evaluation techniques which will be generated into a research study. Requires a minimum of three hundred sixty (360) hours of clinical and field-based experiences.

**EDCI 799. Doctoral Dissertation.** (Variable Credit) Prerequisite: Admission to the Urban Interdisciplinary Education Curriculum Program for the Doctorate in Early Childhood Education. This course is designed to guide doctoral candidates in the practical aspects of designing original dissertation research. Through variable credit hours, this course will assist students in successfully proposing their desired research, seeking Institutional Review Board (IRB) approval, and defending their approved research. Research must contribute to the discipline's body of knowledge.

#### Reading

**RE 501 Basic Speed Reading.** (1 Hour). An individualized course designed for students who desired to increase their speed of reading.

**RE 502 Workshop: Current Problems and Issues in Reading Instruction.** (3 Hours). Designed to meet the needs of teachers, students, administrators, and community leaders who have special interests in selected areas of reading. Content developed around need of specific groups.

**RE 503 Theory and Research in Literacy Education** (3 hours) Designed for candidates to identify controversies in the field of reading and become knowledgeable of research literature and theoretical bases for the issues.

**RE 504 Pre-Reading Skills for Preschoolers and Early Primary Grades.** (3 Hours) Students will participate in situations involving reading readiness skills, oral language, concept development, early

experiences with children's literature-creative storytelling and the study of management systems.

**RE 505 Problems of Reading Instruction in the Multi-Cultural Classroom.** (3 Hours) A thorough investigation of the techniques, materials, and approaches for teaching culturally different students in a multi-cultural environment.

**RE 506 Foundation of Reading-** (3 Hours) This course is designed to introduce factors related to word attack, word recognition, vocabulary development, comprehension skill, study skills and reading speed. Emphasis is placed on terminology that is basic to the understanding of the reading process.

**RE 507 Basic Skills in Reading.** (3 Hours) Designed as an in-depth study of the major reading skills. It focuses on the techniques and activities essential in the teaching of these skills.

**RE 510 Reading in the Content Area.** (3 Hours) A thorough study of techniques for promoting reading growth through teaching content materials.

**RE 511 The Reading and Writing Connection.** (3 Hours) A study of the principles, strategies and current literature that demonstrates the interrelatedness of reading and writing in all content areas and throughout the learner's development. Students will enhance their knowledge of the relationship between reading and writing through practicum experiences.

**RE 512 Using Literature to Teach Literacy Skills.** (3 Hours) A thorough study of integrating the teaching of reading skills through literary selections. Special emphasis will be placed on vocabulary and comprehension skills and concepts that are applicable to the teaching and learning of literary content.

**RE 550 Psychology of Literacy Instruction.** (3 Hours) A thorough study of psychological principles underlying the teaching of reading.

**RE 551 Methods and Materials for Primary Reading Instruction.** (3 Hours) An in-depth study of materials and techniques for the teaching of reading at the primary level.

**RE 552 Methods and Materials for Teaching Elementary Literacy.** (3 Hours) A study of the methods, materials, media, and current approaches for elementary reading instruction.

**RE 553 Phonics for the Reading Teacher.** (3 Hours) A thorough study of phonics knowledge needed by teachers for the effective teaching of word perception.

**RE 554 Teaching Reading to the Gifted.** (3 Hours) The identification of the gifted and creative. Techniques and materials for meeting the needs of these learners will be emphasized. (F, Sum)

**RE 555 Methods and Materials for Secondary Reading Instruction.** (3 Hours) A study of goals, materials, media techniques, and approaches for secondary reading instruction.

**RE 556 Supervised Practicum in Literacy I.** (3 Hours) Procedures for diagnosing and correcting learning problems in reading.

**RE 557 Supervised Practicum in Literacy II**(3 Hours) Provides students the opportunity to apply their knowledge of the reading process by designing and implementing appropriate instructional plans to correct reading difficulties of diverse learners.

**RE 558 Teaching Reading in an Integrated Language Arts Program.** (3 Hours) A thorough study of materials and techniques for teaching in an integrated manner.

**RE 587 Action Research in Literacy Instruction.** (3 Hours) This course provides for intensive analysis of

research in the area of reading as relates to theories, practices, and special topics in teaching and learning.

**RE 588 Technology and Literacy Instruction** (3 hours) An in-depth study of current and emergent technologies in reading instruction and issues related to literacy and technology instruction across the curriculum.

**RE 590 Thesis.** (3-6 Hours) Prerequisite: Completion of required courses. Research to be completed under the direction of major professor.

**RE 591 Internships: Observation and Supervised Field Work in Reading.** (2-9 Hours) Designed for students who have not taken EDCI 401S, Practicum: Principles and Problems of Teaching in the Secondary or Elementary Schools; EDCI 401E, Practicum: Principles and Problems of Teaching in Secondary or Elementary Schools; EDCI 401EC, Practicum: Supervised teaching experience in an off-campus elementary or secondary school setting.

**RE 600 Diagnosis and Correction of Reading Difficulties I.** (3 Hours) Theory, demonstration, and practice in group diagnosis, and procedures for interpreting results.

**RE 601 Diagnosis and Correction of Reading Difficulties II.** (3 Hours) Prerequisite: RE 600. Actual experience in diagnosing reading difficulties, prescribing remedial procedures, and carrying through with prescription.

**RE 602 Teaching Reading to Disadvantaged Youth.** (3 Hours) A thorough study of characteristics of disadvantaged youth, and techniques for meeting their reading needs.

**RE 603 Advanced Research in Reading.** (3 Hours) Prerequisites: RE 600, 601. The actual conducting of research and presentation of findings.

**RE 606 Administration and Supervision of Reading Programs.** (3 Hours) A thorough study of components of a balanced reading program, how to organize these components, and techniques of supervision.

**RE 607 Instructional Strategies for Teaching Children with Specific Exceptionalities.** (3 Hours) Designed as an overview of the exceptionalities children display. It is intended to address the procedures and techniques to be used in teaching reading to children who display these exceptionalities as they are mainstreamed in the regular classroom.

**RE 608 Curriculum Design and Instructional Planning in Reading.** (3 Hours) A study of theory, methods, and approaches to curriculum planning and improvement in providing for individual needs of learners. (S, Sum)

**RE 690 Advanced Thesis Writing.** (3-6 Hours)

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**Executive Ph.D. Program  
in  
URBAN HIGHER EDUCATION**

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Dr. W. Brown  
Dr. F. Okojie  
Dr. A. Thornton

##### *Associate Professor(s)*

Dr. W. Crockett

##### *Adjuncts*

Dr. M. Alexander  
Dr. C. Bishop  
Dr. A. Jefferson  
Mrs. S. Jones  
Dr. N. Campbell-Lewis

#### **Mission**

The Executive Ph. D. Program (EPhD) in Urban Higher Education is intended to prepare executives, middle/senior managers and other institutional leaders in higher education and related human services agencies to respond effectively to the challenges posed by urban and metropolitan communities in a pluralistic society undergoing sustained social, economic and political change.

#### **The EPhD Cohort Model**

This program is designed on the cohort model which requires all admitted students to complete the same courses from beginning to end or a 24-month period. Although culminating dissertation development is finalized in the latter stages of doctoral studies, the preparation, planning and refining of the dissertation is interwoven throughout the 24 months. Students will be required to develop a two-year plan which identifies a balance between their coursework and professional work duties at their home/host institution or agency. It is imperative that this plan is developed to facilitate high performance and sustainable productivity in the student's life during enrollment in this program.

The EPhD cohort model represents a cadre of committed colleagues who enroll in, and graduate from, an accelerated research-based doctoral program collectively-- matriculating in a rigorously planned and intensely prescribed academic program of study according to a signed agreement and a related pledge agreed upon by each student in the cohort.

The EPhD cohort model requires students to carefully and diligently plan ahead. The model promotes collegiality, interdependence, networking and camaraderie among students for a lifetime. The Cohort model is designed for adult learners who are working professionals and can persevere as well as endure the rigors of the program toward personal and professional growth.

#### **Accreditation**

The EPhD program is offered in the College of Education and Human Development which is accredited

by the National Council of Accreditation Teacher Education (NCATE). Both the College of Education and Human Development, and Jackson State University are accredited by the Southern Association for Schools and Colleges (SACS). To date, there is no agency or organization for accrediting programs in higher education at the doctoral level. Students who successfully complete the EPhD program will meet the standards and requirements set by NCATE and SACS.

#### **Program Admission**

Students applying for admission to the EPhD Program must first obtain general admission to the Division of Graduate Studies; however, this admission does not mean automatic admission to the Program. Applications are accepted year round for admission each fall. **Applications must be submitted prior to March 1.** Admission will be limited to a cohort of typically 15-25 participants from higher education faculty, experienced, and mid/entry level executive personnel in higher education and other related sectors. Admission to the EPhD Program will be guided by the following criteria:

1. A Master's degree from an accredited university.
2. A completed EPhD program application.
3. Transcripts for all post secondary work attempted prior to submitting a program application.
4. A satisfactory score on the GMAT, GRE or MAT.
5. References from three (3) professional persons who are knowledgeable of the applicant's professional academic ability, job experiences, leadership potential and availability to participate in the program. A reference from the President or Chief Executive Officer will strengthen the application.
6. Acceptable evidence of a student's writing ability as determined by an on-site writing sample completed under the supervision of the screening committee member.
7. Clear statement on how previous graduate work relates to urban higher education and the proposed dissertation topic.
8. A successful interview with the program screening committee.
9. Recommendation for admission by the screening committee. Note: Students accepted in this program will transfer twelve (12) hours from previous graduate work to complement the core areas. Approval is required by the program faculty, before being admitted formally and officially to the program.

#### **Dissertation Pre-Planning**

As part of the admissions process for the EPhD program, students are required to complete a dissertation framework for their proposed research.

#### **Time Limits**

No student admitted to the Executive PhD program will be granted the doctoral degree unless all program and academic requirements are completed within the required 24 month (2 year program), from the time of admission to graduation from the program, with two consecutive calendar years.

### Financial Aid

Students admitted to the Executive PhD program are strongly encouraged to seek financial support from their home institution/agency. This is also reinforced in the Executive PhD degree agreement signed by the admitted student and his/her supervisor. Under special circumstances, and provided resources are available, graduate research and teaching assistantships or fellowships may be available and awarded on a competitive basis to highly qualified admitted students. Students admitted to the program are eligible to apply for the Stafford Loan.

### Retention

Students admitted to the EPhD program will be required to successfully complete all academic classes, program requirements and evidence toward dissertation to demonstrate student points of progress concerning enrollment to retention, and retention to graduation.

### Residence Requirements

Students admitted to the Executive PhD program will be required to spend approximately one week- end a month, defined as Thursday morning through Sunday morning, to actively participate in all required program classes, activities, modules, and other related field work. Wednesday is considered a travel transition day in preparation for this required residence. Lodging and food expenses are incorporated in the tuition and participatory fees for this program.

### Candidacy Requirements

To be successfully admitted to doctoral candidacy in the Executive PhD program, all students must successfully prepare for the comprehensive examinations, complete the comprehensive examinations, and present evidence of successful progress toward the development of the dissertation. In this regard, students must:

1. Successfully complete formal coursework and all instructionally related activities with a GPA of 3.0 or better following the completion of at least 2 semesters.
2. Successfully pass the-comprehensive examination.
3. Appropriately, and in a timely manner file with the Dean of the Division of Graduate Studies, the dissertation proposal approved by the student's advisor, Department Chair, EPHD Executive Director, and College Dean.

### Cognate Component (12 Hours).

Students accepted in the EPhD must be able to transfer 12 hours of approved previous graduate work before admission is granted to enhance the cognate area of interest and to complement the cores.

### Degree Requirements

This executive program requires approximately 24 months or two years of coursework and related activities, resulting in a minimum of 72 hours, including a minimum of 12 hours toward dissertation. Additional requirements of this program include: (1) completion of the EPhD agreement, (2) satisfactory performance and completion of the comprehensive examinations, following the completion of required course work and (3) successful preparation and defense of the dissertation.

The final basis for granting this degree shall be the candidate's evidence of gained knowledge, skills, and dispositions from the collective course work, mastery of theoretical, conceptual and research perspectives and completion of the dissertation.

### Course Requirements

The Program offers courses on a cohort basis.

#### Professional Specialization Core

Course	Title	Hours
EDHE 814	Leadership in Higher Education	3
EDHE 824	Student Affairs Administration	3
EDHE 825	Methods of Urban and Regional Analysis and Planning	3
EDHE 877	Public Policy Formulation	3
EDHE 882	Seminar in Program Development, Implementation, and Evaluation	3
	<b>Total Hours</b>	<b>15</b>

#### Higher Education Core

Course	Title	Hours
EDHE 800	Philosophy and History of Urban Higher Education	3
EDHE 802	Higher Education Administration & Theory in Cross-Cultural Environments	3
EDHE 804	Higher Education Futures: Strategic Planning and Development	3
EDHE 805	Globalization of Higher Education	3
EDHE 829	Legal Aspects of Higher Education	3
EDHE 865	Higher Education Finance	3
	<b>Total Hours</b>	<b>18</b>

#### Statistics and Research Methods Component

Course	Title	Hours
EDHE 812	Quantitative Research Methods	3
EDHE 813	Qualitative Research Methods	3
EDHE 820	Advanced Statistical Methods	3
EDHE 830	Advanced Qualitative Research Methods	3
EDHE 833	Research Design	3
	<b>Total Hours</b>	<b>15</b>

EDHE 899	Dissertation/Literature Review	12
<b>Cognate Transfer Component</b>		<b>12</b>
<i>12 hours of previous graduate work must be approved for transfer before admission is granted to enhance the cognate area of interest and to complement the cores.</i>		
<b>Total Hours</b>		<b>72</b>

## DESCRIPTION OF COURSES

**EDHE 800 Philosophy and History of Urban Higher Education** (3 Hours). This course is designed to meet the needs of administrators, community leaders, directors and other students to review, and analyze the philosophical and historical events and occurrences that have contributed to challenges in urban and metropolitan communities.

**EDHE 802 Higher Education Administration & Theory in Cross-Cultural Environments** (3 Hours). Designed to provide educational leaders with insight and a background into the lifestyles, values, and aspirations of culturally different Americans as related to the administrative process. Emphasis upon the cultural differences in urban environments and their educational and human resource needs as well as responsive program models.

**EDHE 804 Higher Education Futures: Strategic Planning and Development** (3 Hours). Concepts and skills to prepare educational leaders to anticipate and manage the future, includes systems theory, futures methodology, planning models, scenario writing and designing educational programs and services for the 21st century.

**EDHE 805 Globalization of Higher Education** (3 Hours). This course exams important changes within higher education beyond the borders of the USA and the implications of those changes for United States institutions of higher education and more broadly, for US policies on immigration, financing, export of campuses, services and people. Various topics will include: history of globalization of higher education, the growth of quality education institutions abroad, and American institutions going abroad.

**EDHE 812 Quantitative Research Methods** (3 Hours). This course provides an exploration of current models and issues in educational assessment and evaluation as a professional practice. Students must design, develop and implement comprehensive needs assessment and evaluation plans which include specification of a theoretical framework, problem identification, data collection/analysis procedures, report writing format and dissemination plans. Students will research, summarize and present current multivariate journal publications about issues, practices, and innovations in higher education related assessment and evaluation.

**EDHE 813 Qualitative Research Methods** (3 Hours). An exploration of qualitative research designs and methods, the analysis of qualitative data and the uses of

qualitative research in higher education. Field research techniques will be reviewed and utilized in projects by students.

**EDHE 814 Leadership in Higher Education** (3 Hours). This course is designed to provide grounding in the study of leadership theory and research, notably the evolution of leadership theory to the present emergent paradigm that emphasizes collaboration, character, and empowerment. During this course, students will familiarize themselves with current ideas about the nature of leadership, engage in class activities and assignments which challenge them to employ multiple perspectives as they complete tasks, and undertake a self-examination about who they are and what they believe in as someone who will exert leadership in student affairs and higher education.

**EDHE 820 Advanced Statistical Methods** (3 Hours). A study of advanced statistical procedures: analysis of variance; randomized block, factorial, and repeated measurement designs; analysis of co- variance; non-parametric tests: simple, multiple, and curvilinear regression; introduction to path analysis, canonical correlation, discriminate, and factor analyses; emphasis on higher educational research problems.

**EDHE 824 Student Affairs Administration** (3 Hours). This course is a comprehensive introduction to the field of student affairs administration and its role within institutions of higher learning. The course explores different models of student learning and development; it examines institutional strategies for organizing, staffing, and funding programs and services designed to meet students' academic, social, economic, and developmental needs; and it discusses current issues central to student affairs, with the emphasis on understanding multicultural issues and the role of student affairs practitioners as agents of social change.

**EDHE 825 Methods of Urban and Regional Analysis and Planning** (3 Hours). This course analyzes microeconomic theory as it applies to business operations. Topics include demand theory and estimation; production and cost theories and estimations; capital budgeting theory and analysis; pricing policies, and productions under uncertainty.

**EDHE 829 Legal Aspects of Higher Education** (3 Hours). The course focuses on the role of law in the governance and management of American higher education institutions. Universities and colleges will be used as a lens to better understand non-profit organizations more generally, what constitutes the law, how litigation works, the roles of counsel, employment relationship between organizations and individuals, particularly the relationship between faculty and higher education institutions, and students in academic and social settings.

**EDHE 830 Advanced Qualitative Research Methods** (3 Hours). By reviewing theoretical and practical grounds for knowledge management, this seminar will help students understand emerging issues and provide present and prospective leaders with elements for leveraging intellectual capital as a human resource.

**EDHE 833 Research Design** (3 Hours). This course provides students with the knowledge and skills to

conduct advanced research studies. This course also provides an overview of research design and methods by combining theory and knowledge based on specific subjects in various areas of study. The approach will enable students to learn the art of defining and developing acceptable research questions as well as identifying the appropriate theories and methodological tools to address research questions. This course provides synergistic opportunities of students to develop the competencies necessary to design research projects and utilize appropriate methodologies to make contributions to scholarship in urban higher education.

**EDHE 865 Higher Education Finance** (3 Hours). The function of this course in higher education finance is to combine theory with application and issues facing the financial management of four-year institutions. The perspective is taken from those holding mid-level to senior-level positions in the administrative and academic areas of public/private four-year institutions.

**EDHE 877 Public Policy Formulation** (3 Hours). This course focuses on problems of policy formulation, implementation, and evaluation. The participants will be exposed to policy issues, thinking through goals and objectives, policy adoption, problems of implementation (including perceptible and real gaps between congressional intent and bureaucratic interpretations of congressional intent), and evaluation.

**EDHE 882 Seminar in Program Development, Implementation, and Evaluation** (3 Hours). The purpose of this course is to teach class participants the principles of program development and provide an understanding of how evaluators can help make government more effective by producing timely information on the promise and performance of existing programs.

**EDHE 899 Dissertation/Literature Review** (3 Hours). Students in the EPhD Program in Urban Higher Education will begin to define and develop a literature review upon entrance into the program. Credit per academic session allowable is one hour. The completed dissertation will offer evidence of significant independent research ability, and will contribute to knowledge in the chosen area. Satisfactory completion of the dissertation requirement includes passing an oral examination in defense of the dissertation.

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**DEPARTMENT OF HEALTH, PHYSICAL  
EDUCATION AND RECREATION**

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**Faculty**

Dr. T. Bradley, Assistant Professor  
Dr. P. Nelson, Visiting Assistant Professor  
Dr. H. Williams, Associate Professor/Director Sport Science

The Department of Physical Education offers the Master of Science in Education and Master of Science in Sport Science.

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**Master of Science in Education  
Physical Education**

**Accreditation**

The graduate program, accredited by the National Council for Accreditation of Teacher Education, is designed for students who have demonstrated the capacity to do scholarly graduate work and the willingness to devote the time and effort necessary to succeed in the program.

**Program Objectives**

The program provides students with specialization or diversification in the areas of health, physical education, dance, physiology of exercise, athletic administration, adapted physical education, and administration of physical education in secondary schools, community colleges, and other agencies such as boys and girls clubs, Y.M.C.A.s and Y.W.C.A.s.

**Admission Requirements**

Applicants must be admitted to the Division of Graduate Studies and the Department of Health, Physical Education and Recreation (HPER). The HPER Department has the following admission requirements in addition to the Division of Graduate Studies requirements.

1. A minimum cumulative G.P.A. of 3.00 for regular admission and 2.50 for conditional admission, at the undergraduate level.
2. An applicant must hold a bachelor's degree from an accredited college or university.
3. A completed program application.
4. Interview and writing sample.
5. Three letters of recommendation uploaded during the application process.
6. A portfolio documenting compensating strengths such as teaching, professional presentations, community service, professional memberships and/or coaching.

**Degree Requirements**

To qualify for the master's degree the student must complete 36 semester hours of graduate work.

Course	Title	Hours
EDFL 514	Elementary Statistics	3
EDFL 515	Methods of Educational Research	3
EDFL 568	Curriculum Methods	3
PE 522	Motor Learning and Human Performance	3
PE 540	Organization and Administration of Physical Education in Two and Four Year Colleges	3
PE 550	Research in Physical Education	3
PE 552	Biomechanics	3

PE 553	Advanced Exercise Physiology Hours	<u>3</u> 24
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### Electives

Other coursework is selected in consultation with an academic advisor to complete specific areas of concentration.

<i>Total Hours</i>	<u>12</u> 36
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## Master of Science Sport Science

### Accreditation

The Sport Science curriculum design is strictly set to meet National Accrediting and Recognition bodies within the areas of Sport Management (North American Society for Sport Management/NASSM) and Strength and Conditioning (National Strength and Conditioning Association/NSCA).

### Program Objectives

The Sport Science program provides a variety of interrelated reasons behind the accelerated and sustained growth in the sport science professional preparation program:

- an effort to meet a real, recognizable need for professionally trained administrators in the broad area of sport;
- a natural outgrowth of the study of sport, combined with the view that physical education is a broad-based academic discipline;
- fewer students seeking to become physical education teachers, an overabundance of would-be physical education teachers already seeking jobs, the reduction in requirements for daily physical education in many school systems;
- a conscious effort by professionals within higher education to save jobs of physical education professors (as fewer students pursue traditional physical education as a major), by providing an alternative academic career path; and
- emerging areas of local community, state, regional, national and International arenas jumping on the "sport science bandwagon" once they realized that such programs benefit from these highly trained individuals.

Existing programs at Jackson State University will benefit due to the added graduate emphasis areas that make undergraduate degrees more marketable or attractive to potential employers. Therefore, retention of JSU's undergraduates benefits both existing programs as well as the new Sport Science Program.

The phenomenal growth associated with sport science has not been without controversies, challenges, and problems. The purpose of programs remains essentially the same: to prepare future sport professionals, other than teachers and coaches, for careers in the world of sport. An estimate was made in 2001 that there existed approximately 8 million sports jobs at all levels in the United States. These were in marketing, entrepreneurship, administration, representation, and other sports-related areas. Although there is seemingly a wealth of job opportunities in sport, the competition for these positions has been and will remain severe. Other potential career paths in sport science include athletic team management, finance, sports

medicine/athletic training, journalism, broadcasting, public relations, development and fund raising, sports information, facility management, cardiovascular fitness and wellness administration, aquatics management, among others.

Sport is big business today and will remain so in the future. In fact, sports revenues are exceeding the \$100 billion mark in the United States. As a result, there is an ever increasing need for professionals trained in the managerial, administrative, and business aspects of sport science.

### Admissions Requirements

Applicants for the master's degree must hold an undergraduate degree from a regionally accredited college or university. Applicants must submit official copy of the Graduate Record Examination Score taken within the last 5 years.

### Degree Requirements

To qualify for the master's degree the student must complete 36 semester hours of graduate work for the Sport Management emphasis and 37 semester hours for the Strength & Conditioning emphasis.

### Emphasis Areas

#### Sport Science Core

Core Courses		Hours
Course	Title	
SPM 512	Facility Design & Maintenance	3
SPM 515	Governing Bodies & the Law	3
SPM 560	Ethics of Sport	3
SC 545	Sport Psychology & Sociology	3
PE 550	Research Methods	3
<b>Total Hours</b>		<b>15</b>

#### Sport Management Emphasis

ECO 511 <i>or</i>	Macroeconomics	3
ECO 512	Microeconomics	3
MNGT 516	Statistics for Business Decisions	3
SPM 510	Sport Marketing	3
SPM 530	Sport Finance	3
SPM 543	Sport Administration and Organization	3
SPM 590	Internship <i>or</i>	6
SPM 600	Thesis	6
<b>Hours</b>		<b>21</b>
<b>Total Hours</b>		<b>36</b>

#### Strength and Conditioning Emphasis

BIO 511	Bio Statistics	3
BIO 513	Advanced Human Nutrition	3
PE 552	Research in Physical Education	3
PE 553	Bio Mechanics	
	Advanced Muscular Physiology	3
SC 501	Strength and Conditioning	3
SC 501L	Strength and Conditioning Lab	1

SC 550	Internship <i>or</i>	
SC 600	Thesis	6
		Hours 22
		Total Hours 37

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## DESCRIPTION OF COURSES

### Health

**HE 500 Drug Abuse Education.** (3 Hours) A comprehensive study of the history of drug and alcohol abuse, drug addiction and drug therapy. The course covers the economic and social impact of drug abuse on the country and the world. Consultants from various fields such as medicine, law enforcement, social agencies and education are utilized in an attempt to relate to participants all facets of the drug problem including possible solutions. The course is open primarily to graduate students, in-service teachers, counselors, guidance directors, and school and other institutional administrators.

**HE 501 Foundations of Health Education** (3 Hours) This course is designed to be used as an introduction to students in health education. This course outlines the historical development of health education as a profession and examines critical issues facing health educators today. The philosophy of health education and health promotion serve as a common cornerstone to subsequent coursework. Competencies of health educators will be examined. This course explores the foundation of health education in school, community, clinic and worksite settings.

**HE 502 Methods and Materials in Health Education** (3 Hours) This course is designed to provide a teacher, counselor, administrator or health professional with a broad understanding of the how to plan a School Health Program, coordinate school health activities with other school and community activities, assess school and community needs for health education and evaluate school programs.

**HE 503 Organization and Administration of School and Community Health.** (3 Hours) This course explores the school health education community health programs with emphasis on organization and administration of school, public health, voluntary, and private health programs.

**HE 550 Research in Health** (3 Hours) This course deals with the process of arriving at dependable solutions to problems through the planned and systematic collection, analysis and interpretation of data related to the field of health. Students will also study the scholarly application of the scientific method to the solving of health problems.

**HE 600 Public and Community Health** (3 Hours) This course is designed to communicate an understanding in the area of public and community health. It traces the beginning of public health and community health and studies the relationship between public and community health.

### Physical Education

**PE 505 Practicum in Lifetime Sport.** (3 Hours) Designed to study lifetime sports such as tennis, archery, golf, swimming, badminton, and many others in which one may participate throughout life.

**PE 509 Principles and Problems of Coaching.** (3 Hours) This course is designed to deal with the recognition, discussion, and systematic analysis of

controversial issues and problems in coaching and athletics. Topics studied are: psychological-sociological implications of athletics, crowd control, profiles of coaches, women and athletics, financial crisis in athletics, personality traits and anatomical structure of athletes, interscholastic athletic competition below high school level, recruitment of minority athletes and financial aid.

**PE 510 Theory and Practice of Coaching Basketball.** (2 Hours) Designed to give the student experiences in dealing with the basketball program from a scientific standpoint. The student will be exposed to experiences relative to the application of mechanical, physiological, and kinesiological laws to the basketball program. The student will explore the psychology of coaching as well as review some of the problems that are specifically related to the basketball program such as recruiting, theories of the game, organizing practice, sideline coaching, and the rules and regulations of various governing bodies.

**PE 511 Theory and Practice of Coaching Football.** (2 Hours) Designed to give the student experiences in dealing with the football program from a scientific standpoint. The student will be exposed to experiences relative to the application of mechanical, physiological, and kinesiological laws to the football program. The student will explore the psychology of coaching as well as review some of the problems that are specifically related to football programs such as recruiting, theories of the game, organized practice, sideline coaching, and the rules and regulations of various governing bodies.

**PE 512 Theory and Practice of Coaching Baseball.** (2 Hours) Designed to give the student experiences in dealing with the baseball program from a scientific standpoint. The student will be exposed to experiences relative to the application of mechanical, physiological, and kinesiological laws to the baseball program. The student will explore the psychology of coaching as well as review some of the problems that are specifically related to the baseball program such as recruiting, theories of the game, organizing practice, sideline coaching, and the rules and regulations of various governing bodies.

**PE 513 Theory and Practice of Coaching Track and Field.** (2 Hours) Designed to give the student experiences in dealing with the track program from a scientific point of view. The student will be exposed to experiences relative to the application of mechanical, physiological, and kinesiological laws to the track program. The student will explore the psychology of coaching track as well as review some of the problems that are specifically related to the track program such as recruiting, organizing practice and the rules of governing bodies.

**PE 540 Organization and Administration of Physical Education in Two and Four Year Colleges.** (3 Hours) Study of the organizational structure of physical education in two and four year colleges. The course will cover theory, professional preparation and practices and administration. The course will show how administrative theories are developed. It will dwell on the broad process of administration that might be designed as decision making, communicating, activating, planning and evaluating.

**PE 543 Organization and Administration of Sport.** (3 Hours) A study of the various organizations and administration patterns of athletics in schools, colleges, universities, and professional athletics.



**PE 550 Research in Physical Education.** (3 Hours) Study and application of research techniques to selected problems in health, physical education, and recreation.

**PE 552 Biomechanics.** (3 Hours) In-depth study of the application of mechanical principles to athletic performance. The study will make application of laws of balance, motion, force, work and energy, to track and field, baseball, football, swimming, diving, gymnastics, basketball, golf, and tennis.

**PE 553 Advanced Exercise Physiology.** (3 Hours) Prerequisite: Human Physiology and/or Introductory Course in Exercise Physiology. Lectures, discussions and experiments dealing with the structure, function and metabolism of skeletal and cardiac muscles Emphasis on correlating muscle function with metabolic events. The biochemical basis of adaptation of muscle function is considered.

**PE 560 Sociology of Sport.** (3 Hours) The course will include the study of processes and patterns of individual and group interaction, the forms of organization of social groups the relationships among them, and group influences on individual behavior within a sport context will be discussed.

**PE 587 Independent Study.** (1 Hour) Implementation of individual student research project under the guidance of an advisor.

**PE 589 Independent Study.** (2 Hours) Opportunity for students to undertake independent study and research under the direction of a faculty member. The student will submit a written report and may be asked to stand a comprehensive examination of his work.

**PE 590 Thesis Writing and Research In Physical Education.** (1-6 Hours) An independent investigative work in physical education. The candidate chooses a problem, but approval by his chairman is required. Credit is granted only after thesis is completed and approved by the department.

#### **Sport Science**

**SC 501 Strength & Conditioning** (3 hours) This course will enable the student to develop knowledge and expertise in the areas of strength training, cardiovascular endurance, flexibility, reaction time, speed, and agility in traditional and non-traditional sports. Emphasis will be placed on implementation and measurement of the above programs in conjunction with athletic development.

**SC 501L Strength & Conditioning Lab** (1 hour) This lab will enable the student to develop practical knowledge and expertise in the areas of strength training, cardiovascular endurance, flexibility, reaction time, speed, and agility in traditional and non-traditional sports. Emphasis will be placed on hands-on implementation and measurement of the above areas in conjunction with athletic development.

**SC 545 Sport Psychology and Sociology** (3 hours) This course provides a comprehensive analysis of the field of social psychology and the theories that apply to the world of sport and physical activity. This course will focus upon and provide an overview of the major social factors and theories that affect those involved in sport. In-depth discussion of the interactions between the athlete, team, coach and spectators will occur.

**SC 550 Internship** (3/6 hours) The internship is the capstone experience for the Graduate Sport Science student. The internship allows the student to work and learn outside of the classroom at an approved site selected by the student. This internship is designed to be a mutually beneficial experience and provide a practical, experiential learning environment for

competent, energetic students. The student is required to complete a total of 250 hours (per 3 hour credit) working at an approved internship site.

**SC 600 Thesis** (3/6 Hours) Students select a topic for original research; conducts and writes their research during the course of the class.

**SPM 510 Sport Marketing.** (3 Hours) This course addresses the principles of sport marketing, which include the areas of marketing, promotion, and fundraising within the context of interscholastic, intercollegiate, amateur, and professional sports. The course will include an overview of the past and present sport business industry and market; sport marketing theory and systems; the content, pricing, distribution, and promotional techniques of the sport product; media relations; endorsements and sponsorships; and licensing.

**SPM 512 Facility Design and Maintenance.** (3 Hours) This course will provide the student with the practices and principles of planning, designing, constructing and developing sport facilities, including swimming pools, recreation centers, gymnasiums, fitness centers, golf courses, stadiums, ice skating rinks, skateboard parks, ball-fields and much more. Significant emphasis is placed upon wise land-use practices, current planning, design, construction and development techniques and standards, and, efficient, effective and practical recreation facility planning, design, construction and development.

**SPM 515 Governing Bodies & The Law.** (3 hours) This course is designed to provide the graduate student with information concerning the history, basic structure and governing principles of various sport agencies. The course will include, but is not limited to an examination of case law (collective bargaining, contracts, etc.), the National Collegiate Athletic Association, the National Association of Intercollegiate Athletics, and professional sports leagues in the United States and Europe.

**SPM 530 Sport Finance.** (3 hours) This course is an examination of the principles of economics, budgeting, and finance as it applies to the sport industry.

**SPM 543 Sport Administration** (3 hours) A comprehensive study of the various organizations and administrative patterns of athletics in schools, colleges, universities and other professional sport organizations. This course provides an introduction to the study of administrative considerations of various sport programs, including aims, policies, principles, staffing, scheduling, finance, facilities and equipment, maintenance, legal considerations, risk management, publicity and program evaluation within the realm of sport management and administration.

**SPM 560 Ethics of Sport.** (3hours) This course is designed to provide the graduate student with information concerning ethical theories and issues relating to sport and physical activity.

**SPM 590 Sport Internship** (3/6 hours) The internship is the capstone experience for the Graduate Sport Science student. The internship allows the student to work and learn outside of the classroom at an approved site selected by the student. This internship is designed to be a mutually beneficial experience and provide a practical, experiential learning environment for competent, energetic students. The student is required to complete a total of 250 hours (per 3 hour credit) working at an approved internship site.

**SPM 600 Thesis** (3/6 hours) Students select a topic for original research; conducts and writes their research during the course of the class.

## COLLEGE OF LIBERAL ARTS

**Dr. Mario Azevedo, Dean**

**Dr. RaShell Smith-Spears, Faculty Fellow**

**Dr. David Akombo, Faculty Fellow**

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### **School of Communications**

- ❶ English, Foreign Languages, and Speech Communication
- ❶ Journalism and Media Studies

### **School of Fine and Performing Arts**

- ❶ Music

### **School of Social and Behavioral Sciences**

- ❶ Criminal Justice and Sociology
- ❶ History and Philosophy
- ❶ Political Science
- ❶ Psychology

The principal objective of the College is to provide diverse opportunities for meaningful and quality liberal education. The College serves both graduate and undergraduate students. It offers a wide variety of majors in the academic disciplines, core courses, as well as balanced programs of study in related disciplines. The College of Liberal Arts prepares students for many kinds of professions and graduate studies; it cooperates with the College of Education and Human Development in offering joint professional and pre-professional studies for teaching majors.

While the long-range goal is that of producing a well-rounded individual--intellectually, spiritually, physically, emotionally, and aesthetically, the College seeks to accomplish this primarily by placing emphasis on intellectual achievement. Regardless of their professional interest, students are expected to become fluent in their own language, literate in at least one foreign language, and to give attention to the physical and life sciences, computer technology, and the fine arts.

It is hoped that disciplines in the liberal arts will enlarge and augment the student's particular concern in order to produce the resourceful and thinking graduate who has an understanding of self, the past, and present, and who is prepared intellectually and morally for the task of shaping the future.

The College of Liberal Arts offers the following graduate degrees: Doctor of Philosophy in Clinical Psychology; the Master of Arts in Criminology and Justice Services, English, History, Political Science and Sociology; the Master of Music Education; the Master of Science in Mass Communications; and the Master of Science in Education with concentrations in several foreign languages.

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## SCHOOL OF COMMUNICATIONS

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### Departments

- ❶ English, Foreign Languages, and Speech Communication
- ❶ Journalism and Media Studies

The School of Communications is comprised of the Department English, Foreign Languages, and Speech Communication and the Department of Journalism and Media Studies.

The Department of English, Foreign Languages, and Speech Communication has offices on the fourth floor of the Dollye M. E. Robinson Building. It utilizes classrooms in several locations across the campus.

The Department of Mass Communications is located in the Mississippi e-Center. In addition to faculty and staff offices, the facility includes writing and telecommunications labs and studios. The University also operates a low-power television station, a radio station, and a campus newspaper and several other publications. The faculty includes practicing journalists and features a strong orientation toward media research.

The School of Communications offers several programs of graduate study designed to complement the mission of the College of Liberal Arts and the University. The Department of English, Foreign Languages, and Speech Communication offers the Master of Arts in English and the Master of Science in Education: Secondary Education, available with concentrations in French, or Spanish. The Department of Mass Communications offers the Master of Science in Mass Communications, available with a special concentration in Urban Communications.

## DEPARTMENT of ENGLISH, FOREIGN LANGUAGES, & SPEECH COMMUNICATION

Dr. Candis Pizzetta, Associate Professor and Interim Chair

P.O. Box 17600

Telephone: (601) 979-2249

e-mail: lit.language.speech@jsums.edu

### Faculty

Dr. H. Chukwuma, Professor

Dr. F. Cosey, Assistant Professor

Dr. H. Crump, Associate Professor

Dr. T. Cunningham, Assistant Professor

Dr. D. Ginn, Associate Professor

Dr. P. McDaniels, Professor

Dr. B. Phillips, Assistant Professor

Dr. L. Perez Alonso, Assistant Professor

Dr. C. Pizzetta, Associate Professor

Dr. S. Smith, Assistant Professor

Dr. R. Smith-Spears, Associate Professor

### Mission

The mission of the Department of English, Foreign Languages, and Speech Communication is to provide a general, liberal, and professional education to students in languages, literature, grammar and usage, and composition. The programs enable students to communicate clearly, to think critically, to develop an understanding of self and others, and to demonstrate an understanding and appreciation of aesthetic principles underlying the study of language, literature, and composition. To this end, the department offers courses in the core to the general student population and specialized courses to its majors, all of which promote student preparedness for both career success and engaged and informed citizenship.

### Program Objectives

The graduate program in English is designed:

- ❶ To prepare students for advanced programs of study in English and related areas.
- ❶ To prepare well-qualified teachers of English for secondary schools and community colleges.
- ❶ To provide an in-service program for teachers of English who serve in secondary schools and community colleges.
- ❶ To prepare students for careers in the mass media.
- ❶ To prepare for classroom diversity in the sociolinguistics of languages.

### Admission Requirements

In accordance with the admission requirements of the Graduate School, admission to the graduate degree program in English requires the following:

1. The Graduate Application for Admission
2. An official copy of transcripts from all colleges/universities attended

- 3- Three letters of recommendation uploaded to the online admissions portal
- 4- Writing Sample: Students must submit via email to the department chair or graduate coordinator an electronic copy of an undergraduate research paper
5. A satisfactory score on the TOEFL (Test of English as a Foreign Language) for International applicants.

### Degree Requirements

The Department of English, Foreign Languages, and Speech Communication offers the following degrees in English: Master of Arts in English and Master of Science in Education with concentrations in French or Spanish. Thirty to thirty-six semester hours are required, depending on the degree program offered.

#### MASTER OF ARTS IN ENGLISH

Core Courses	Title	Semester Hours
ENG 501	Research and Bibliography	3
ENG 505	Critical Analysis of Literature	3
ENG 590	Thesis Writing	6
LING 501	Fundamentals of Linguistic Science	3
<b>Total Core Hours</b>		<b>15</b>
Electives	(500 or 600 levels)	15-18

**NOTE:** No more than six (6) hours earned outside the major field may be counted toward the degree.

**Non-thesis Option:** Students may elect to pursue the non-thesis option, but they must declare their intent upon entering the program. Students choosing this option must satisfy the following:

1. Complete a 33-hour curriculum, which must include the core courses (ENG 501, ENG 505, and LING 501) and two courses from the following list: ENG 570, ENG 586, ENG 591, ENG 620, ENG 622, LING 504, LING 509, LING 511, LING 512, LING 514.
2. Prepare a portfolio.
3. Present the portfolio as a part of an oral examination to be held no later than six weeks prior to the expected date of graduation.

#### DESCRIPTION OF COURSES

##### English

**ENG 500 Advanced Laboratory Writing.** (3 Hours) A practical course for graduate students who wish to improve their writing and to be informed about modern grammar and usage. (Cannot be used for graduate degree credit.)

**ENG 501 Research and Bibliography.** (3 Hours) An intensive study of sources for research in literature and of representative problems and techniques of literary research.

**ENG 503 Survey of Grammatical Principles.** (3 Hours) A course for teachers of English surveying the concept of grammar and its working principles.

**ENG 505 Critical Analysis of Literature.** (3 Hours) A study of the literary genres in terms of their conventions, and analysis of literature using methods of explication de texte and structural analysis.

**ENG 506 Seminar in English Literature.** (3 Hours) A detailed study of major figures or a genre in English literature.

**ENG 507 Comparative Literature.** (3 Hours) Cross-cultural study of a selected period, theme or genre in world literature.

**ENG 514 World and Classical Literature.** (3 Hours) Part I Undergraduate 430. This course will acquaint the students with a wide variety of genres from the classical, medieval, and renaissance periods of Western Literature.

**ENG 515 World and Classical Literature.** (3 Hours) Part II Undergraduate 431. This course is a continuation of 514. Beginning with the late Renaissance, students will read a wide variety of genres from Western Literature. The course concludes with contemporary writers.

**ENG 520 American Fiction before 1900.** (3 Hours) A study of major writers such as Hawthorne, Melville, and the novelists of the Gilded Age.

**ENG 521 American Fiction after 1900.** (3 Hours) A study of major writers of fiction in the twentieth century.

**ENG 530 Modern Drama.** (3 Hours) A course on trends in drama, particularly Theatre of the Absurd, including Ibsen, Strindberg, Ionesco, Leroi Jones, Beckett.

**ENG 531 Modern Poetry and Poetics.** (3 Hours) A study of the major poets, of the aesthetic principles, which govern literary form, and of the principles and rules of poetic composition.

**ENG 541 Publishing Procedures for Poetry and Prose.** (3 Hours) A course which acquaints the student with the basics of how to get creative works, as well as other kinds of writing, into print. Several authorities in these fields will be available to share their expertise with the students.

**ENG 555W Humanities Workshop.** (3 Hours) An interdisciplinary course, which deals with ideas about what it means to be human and with the ways in which humanity has expressed these ideas. Specifically, the workshop integrates the study of literature, art, music in the context of an examination of various fundamental concepts.

**ENG 558W Improving Instruction in Composition.** (3 Hours) A workshop designed to help teachers in secondary schools improve the teaching of composition. Varied approaches and methods will be stressed each time the workshops are offered.

**ENG 560 Seminar in American Literature.** (3 Hours) A research course in which the subject varies from semester to semester; one or more term papers with complete bibliographies and a reading list are required.

**ENG 570 Technical Writing.** (3 Hours) A writing course for students in business and industry; emphasis on letters, formal and informal reports, technical instructions, description and technical articles.

**ENG 586 Practicum in Teaching Composition.** (3 Hours) This graduate course in teaching composition is a prerequisite for all graduate assistants in English, but it is also open to in-service teachers. Content of course will include writing papers based on principles which freshman papers are based on, reading about teaching freshman English, reading materials for the JSU freshman course and discussing ways of presenting it, grading papers, observing composition classes, and teaching freshman classes.

**ENG 590 Thesis Writing.** (1-6 Hours)

**ENG 591 Independent Study.** (3 Hours) For students working on projects.

**ENG 600 Old English.** (3 Hours) Prerequisite: LING 501. A study of Old English phonology, morphology, and syntax to prepare the student to read Anglo-Saxon literature in the original.

**ENG 601 Readings in Old English** (3 Hours) Prerequisite: ENG 600. Readings from Beowulf, Old English Poetry of other types; selections from Bede, Domesday Book, the Anglo-Saxon Chronicle, and Holy Writ.

**ENG 602 Middle English.** (3 Hours) Prerequisites: LING 501, ENG 600 desirable but not required. A study of the phonology, morphology and syntax of Chaucerian English to prepare students to read English literature produced between 1100 and 1500.

**ENG 603 Readings in Middle English.** (3 Hours) Prerequisite: ENG 602. Exercises in reading Middle English poetry and prose.

**ENG 604 Seminar in Medieval Literature.** (3 Hours) Prerequisites: ENG 600 and 602. A study of Old and Middle English literature and authors including discussion of the historical, social and religious background.

**ENG 606 Seminar in Renaissance Literature.** (3 Hours) A study of English Renaissance literature and its European antecedents.

**ENG 608 Seminar in Nineteenth Century Literature.** (3 Hours) A study of Romanticism and Realism in English, American, and other national literatures.

**ENG 609 Seminar in Contemporary Literature.** (3 Hours) A study of a specific theme, genre, or style exemplified in American, English, and other contemporary literature.

**ENG 611 Seminar in African-American Literature.** (3 Hours) In-depth study of selected works by African American writers.

**ENG 613 Seminar in African Literature.** (3 Hours) A study of selected contemporary African poets, novelists, and dramatists with special attention to the traditional culture and to social and political conditions reflected in them.

**ENG 619 Creative Writing.** (3 Hours) A course designed for the advanced writer of poetry, fiction, essay, and drama in which publication, readings, and presentations are required.

**ENG 620 Classical Rhetoric.** (3 Hours) A study of persuasive discourse applying the system set up by Aristotle, Cicero, and Quintilian with analysis of writings and application of effective strategies to the students' own writing.

**ENG 622 Seminar on Writing Problems.** (3 Hours) A course for teachers of composition in junior and senior high schools. Students will analyze problems, devise corrective exercises and appropriate writing assignments, and write model essays.

**ENG 690 Independent Study.** (3 Hours)

### Linguistics

**LING 500 Research in The Social and Behavioral Sciences.** (3 Hours) A course in basic research theory, practice, and concepts. Emphasis is on proposal writing; research techniques; thesis form; structure; development; and APA documentation.

**LING 501 Fundamentals of Linguistic Science.** (3 Hours) Introduction to the scientific study of language; topics include language and linguistics, philology, phonology, morphology, and syntax with emphasis on the linguistic features of English.

**LING 503 Phonetics and Phonemics.** (3 Hours) Prerequisite: LING 501. A study of the production and discrimination of speech sounds. Emphasis on production, application, and discrimination of phonological differences and variations. Topics include phonetic change, phonological rules, and pronunciation standards.

**LING 504 Applied Linguistics.** (3 Hours) Prerequisite: LING 501. Application of the principles of linguistics to the teaching of composition and grammar; emphasis on linguistic terminology, immediate constituent analysis, and transformational-generative grammar.

**LING 505 Semantics.** (3 Hours) Prerequisite: LING 501. An advanced course in semantics; emphasis on types of meaning, transfer functions of speech, and systems of semantic principles. (Restricted Elective)

**LING 506 Transformational Syntax.** (3 Hours) Prerequisite: LING 501. An advanced course in the techniques of generative analysis and the transformational implications of Noam Chomsky's theory with exercises in the structure of English and other languages.

**LING 507 Psycholinguistics.** (3 Hours) Prerequisite: LING 501. A study of the principles of learning theory in verbal behavior with emphasis on operant conditioning and its applications to language programs and other remedial situations.

**LING 508 Sociolinguistics.** (3 Hours) Prerequisites: LING 501, 503. A study of language in society: its social settings, and its speech communities. Topics include dialects, language variation, and bilingualism.

**LING 509 Modern Trends in Grammar.** (3 Hours) Prerequisite: LING 501. A study of grammatical principles derived from structural and generative-transformational grammar with exercises in grammatical analysis.

**LING 510/406 Morphosyntax.** (3 Hours) Prerequisites: LING 501, 506. The study of word formations and syntactic arrangement. The goal of the course is to familiarize students with the basic principles of morphological theory and analysis, including traditional approaches (item-and-arrangement, item-and-process, and word-and-paradigm) as well as generative-transformational morphology.

**LING 511 Linguistics and Pedagogy.** (3 Hours)  
Prerequisites: LING 501, 504. A practicum, which focuses on the principles that underline the transfer of linguistic information from teacher to student. Emphasis is on the comprehension of content. Students perform individual research tasks, adapt theory to practical classroom activities, and fit linguistic principles and educational requirements together.

**LING 512 Second Language Teaching.** (3 Hours)  
Prerequisite: LING 501. A course designed to give methods and techniques for teaching English as a Second Language, English as a Second Dialect, and English as a Foreign Language. The primary focus is the linguistic discovery of individual differences in language learning, language aptitude, and the natural and unnatural methods of language teaching. (Restricted Elective).

**LING 514 Linguistics in Education.** (3 Hours)  
Prerequisites: LING 501, 504. A course that demonstrates the role of linguistics and language in education. A variety of topics are analyzed and discussed to determine the best approaches to the development of skills in the language arts. There is a brief survey of general linguistics and of the nature and functions of language. (Restricted Elective).

**LING 546 Languages of the World.** (3 Hours)  
Prerequisites: LING 501, 506. A survey of major language families investigating the topological classifications of languages and language universals, writing systems, artificial "international" languages, and "mixed" languages.

**LING 590 Thesis Writing.** (Variable 1-6)

**LING 639 The History of Linguistic Science.** (3 Hours)  
Prerequisite: LING 501. A historical study of language and linguistic theories from the early middle ages through the rise of structuralism and the theories of the twentieth century. (Restricted Alternate Elective)

**LING 650 Dialectology.** (3 Hours)  
Prerequisite: LING 501. An introduction to field work methodology, dialect variations, and linguistic surveys of regional and social language differences.

**LING 651 Black Dialect in Literature.** (3 Hours)  
Prerequisites: LING 506, 650. A study of the forms of dialect and their expressive power in the literature of America and other regions where blacks adapt the dialect to standard language. [Cross reference: FR 551, FR 552].

**LING 653 Bilingualism and Cultural Pluralism.** (3 Hours)  
Prerequisites: LING 501, 508. A course designed to promote better understanding among cultures in present day societies. This course gives a description of bilingualism and bidialectalism as social, psychological, and linguistic. Students study language contact situations in communities among individuals from a variety of cultures. (Restricted Alternate Elective)

**LING 654 Afro-American Sociolinguistics.** (3 Hours)  
Prerequisites: LING 504, 508. A course in the historical development and linguistic description of Caribbean and North American Creoles, including an investigation of Black Vernacular English and the relationships between linguistic and socio-cultural factors of these varieties; the complex processes of creolization and pidginization; the Creole Continuum; Black-white speech differences.

Students who are proficient in a foreign language may wish to choose electives from among the following courses offered by the Area of Foreign Languages: FR 527, SP 527, GER 527, FR 528, SP 528, GER 528, FR 524, SP 524.

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## Foreign Languages

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### Mission

The Area of Foreign Languages offers a multi-faceted program in foreign languages:

1. The Proficiency Advancement Program for secondary teachers of French or Spanish;
2. The Master of Science in Secondary Education degree with a concentration in French or Spanish. (MSEd.)

The design and intent of the concentrations of Foreign Languages at Jackson State University are to offer training and opportunities for persons wishing to further their mastery of foreign language skills.

The Foreign Language Area is furthermore committed to the continued education of para-professionals through the offering of special courses and workshops designed to increase their professional competencies, i.e., the Proficiency Advancement Program.

### Accreditation

This Area implements its programs in accordance with the certification requirements of the Mississippi State Department of Education and the standards of the Modern Language Association of America.

### Program Objectives

1. To develop an awareness of the commitment to the importance of foreign language learning at all levels of education.
2. To become proficient in the systematic skills inherent in teaching Foreign Languages.
3. To meet teacher certification requirements for the State of Mississippi and other states.
4. To become well rounded in the related linguistic and humanistic disciplines and their application to the individual, to his profession, and to his society.
5. To interact for the purpose of personal growth with a multi-national faculty representing broad multi-cultural experiences with global perspective.
6. To prepare for advanced degrees.

### Proficiency Advancement Program

*(for Secondary Teachers of Foreign Languages)*

The Proficiency Advancement Program is a 21-hour concentration of courses leading to a Certificate of Proficiency in the Teaching of Foreign Languages. The program is an assemblage of courses on the graduate level meant specifically for those people teaching a foreign language whose foreign training on the undergraduate level is less than that required for a minor. The courses in themselves will not satisfy any

requirements for an undergraduate major in that language. The program is basically designed for non-degree students currently engaged in teaching one or more junior high or high school foreign language courses.

**Program Objectives**

1. To reinforce and implement basic skills already being used in the classroom.
2. To intensify the teacher's speaking skills.
3. To strengthen the teacher's command of grammatical structures.
4. To acquire a knowledge and understanding of the culture.
5. To offer source materials, techniques and activities in every phase of language learning and teaching.

**Admission Requirements**

To enter the Master of Science in Secondary Education with a concentration in French or Spanish the incoming student must present a B.A. or B.S. degree in the language of concentration or credit hours equivalent to the number of hours required for majors in the above languages.

**Proficiency Advancement Program**

Required Courses	Title	Semester Hours
<u>French</u>		
FR 501, 502	French Grammar for Teachers	6
FR 503, 504	Oral French for Teachers	6
FR 505	France: Its People and Culture	3
FR 507	Modern French Thinkers	3
FLG 509	Methods and Materials for Intracurricular Activities	3
		<b>Total Hours 21</b>

Spanish

SP 501	Spanish Grammar for Teachers	3
SP 503, 504	Oral Spanish for Teachers	6
SP 505, 506	Spain and Latin America: The People and Culture	6
SP 507	Readings from Spanish Cultural Materials	3
FLG 509	Methods and Materials for Intracurricular Activities	3
		<b>Total Hours 21</b>

**MASTER OF SCIENCE IN SECONDARY EDUCATION (MSEd.)**

Core Courses	Title	Semester Hours
EDFL 511	History and Philosophy of Education, <i>or</i>	3
PSY 566	Advanced Educational Psychology	3
EDFL 514	Elementary Statistics	3
EDFL 515	Methods of Educational Research	3

EDFL 568	Curriculum Methods	3
		<b>Total Hours 12</b>

**French Courses**

FLG 509	Methods & Materials for Intracurricular Activities	3
FR 511	Studies in French Culture I	3
FR 512	Studies in French Culture II	3
FR 515	Methods of Teaching French	3
FR 520	Advanced French Composition	3
FR 521	Advanced French Conversation	3
FR 524	French/English Contrastive Linguistics	3
FR 551-55	French Literature Course	3
		<b>Total hours 21</b>

Electives (500 or 600 level)\* 6

**Spanish Courses**

FLG 509	Methods & Materials for Intracurricular Activities	3
SP 511	Studies in Spanish Culture I	3
SP 512	Studies in Spanish Culture II	3
SP 520	Advanced Spanish Grammar	3
SP 521	Advanced Spanish Conversation	3
SP 524	Spanish/English Contrastive Linguistics	3
	One Contemporary Literature Course	3
		<b>Total hours 21</b>

Electives (500 or 600 level)\* 6

\* Electives may be in this language, another foreign language, English, or other field, which complements the student's former training. EDSE 602, Comparative Education is recommended.

**DESCRIPTION OF COURSES**

**French**

**FR 500 French for Reading Knowledge.** (3 Hours) A course designed to prepare non-language MA candidates for the Graduate Foreign Language Reading Examination. S or U grades given. May be repeated. Does not satisfy the undergraduate language requirement or by itself the graduate reading requirement. The student is encouraged to become familiar with the other options associated with the graduate foreign language requirement.

**FR 501-502 French Grammar for Teachers.** (3-3 Hours) Structure and function of the French language with direct application to modern usage, both oral and written. Prerequisites: Fr. 101-102, 201-202 or equivalent. Cannot count toward any undergraduate degree program except by special departmental arrangement.

**FR 503-504 Oral French for Teachers.** (3-3 Hours) Designed to develop oral-aural skills and general fluency

in the language. Prerequisites Fr. 101-102, 201-202 or equivalent. Cannot count toward any undergraduate degree program except by special departmental arrangement.

**FR 505 France: Its People and Culture.** (3 Hours) Study of the French culture with emphasis on geographical and historical introduction, aesthetic, linguistic and philosophical insights into French civilization and culture. Prerequisites: Fr. 101-102, 201-202 or equivalent. Cannot count toward any undergraduate degree program except by special departmental arrangement.

**FR 511 Studies in French Culture I.** (3 Hours) French culture as expressed in its art, architecture, music, philosophy. The historical background leading to such achievements will be emphasized.

**FR 512 Studies in French Culture II.** (3 Hours) A continuation of FR 511. Additionally, cultural aspects of French-speaking African countries, Canada, and the French-speaking Caribbean area will be studied.

**FR 515 Methods of Teaching French.** (3 Hours) May be waived. (Not required for students who have had an equivalent course on the undergraduate level.) A survey and free discussion of historical and modern methods employed in the teaching of French. Familiarity with pedagogical journals and literature will be especially stressed.

**FR 520 Advanced Composition.** (3 Hours) Practice in written French designed to give the student mastery of grammar and composition.

**FR 521 Advanced Conversation in French.** (3 Hours) Practice in spoken French designed to give the student mastery and confidence in his/her use of spoken French. Will also include contemporary changes in the sounds and vocabulary of French.

**FR 524 French/English Contrastive Linguistics.** (3 Hours) Prerequisite: Undergraduate preparation in French. A study of the contrast between English and French and of the techniques for comparing them.

**FR 527 History of the French Language.** (3 Hours) (Cross-reference with LING 602). The development of French from Latin together with other influences on the growth of the language.

**FR 580 Independent Study.** (3 Hours) Intensive study of a subject selected in accordance with student needs. Topics will vary and may include civilization, techniques of literary analysis and criticism, study of major literary movements, individual authors and their works.

**FR 588 Master's Project.** (1-3 Hours)

**FR 590 Master's Thesis.** (1-3 Hours)

### Spanish

**SP 500 Spanish for Reading Knowledge.** (3 Hours) A course designed to prepare non-language MA candidates for the Graduate Foreign Language Reading Examination. S or U grades given. May be repeated. Does not satisfy the undergraduate language requirement or by itself the graduate reading requirement. The student is encouraged to become familiar with the other

options associated with the graduate foreign language requirement.

**SP 501 Spanish Grammar for Teachers.** (3 Hours) Emphasis on those elements required for the effective presentation of syntactical structure in the classroom on all levels. Prerequisites: SP 101-102, 201-202 or equivalent. Cannot count toward any undergraduate degree program except by special departmental arrangement.

**SP 503-504 Oral Spanish for Teachers.** (3-3 Hours) Designed to develop oral-aural skills and general fluency in the language. Prerequisites SP 101-102, 201-202 or equivalent. Cannot count toward any undergraduate degree program except by special departmental arrangement.

**SP 505-506 Spain and Spanish America: The People and Culture.** (3-3 Hours) Study of the Spanish culture with emphasis on geographical and historical introduction, aesthetic, linguistic and philosophical insights into Spanish civilization and culture. Prerequisites: SP 101-102, 201-202 or equivalent. Cannot count toward any undergraduate degree program except by special departmental arrangement.

**SP 507 Readings from Spanish Cultural Materials.** (3 Hours) Acquaints teachers and prospective teachers with such works as may be used effectively in the classroom. Selections from the writings of outstanding literary figures are read and discussed. Prerequisites: SP 101-102, 201-202 or equivalent. Cannot count toward any undergraduate degree program except by special departmental arrangement.

**SP 511 Studies in Spanish Culture I.** (3 Hours) The presentation of Spanish Culture and History as expressed in its art, architecture, music and philosophy.

**SP 512 Studies in Spanish Culture II.** (3 Hours) The presentation of Spanish American culture and history as expressed in its art, architecture, music and philosophy.

**SP 515 Methods and Materials of Teaching Spanish.** (3 Hours) Resources, classroom materials, standard practices and problems in the teaching of Spanish. Practical application to actual classroom situations. Familiarity with pedagogical journals and literature. May be waived for students who have had an equivalent course on the undergraduate level.

**SP 520 Advanced Composition in Spanish.** (3 Hours) Practice in written Spanish designed to give the student mastery of grammar and composition.

**SP 521 Advanced Conversation in Spanish.** (3 Hours) Practice in spoken Spanish designed to give the student mastery of and confidence in his/her use of spoken Spanish. Will also include contemporary changes in the sounds and vocabulary of Spanish.

**SP 524 Spanish/English Contrastive Linguistics.** (3 Hours) Prerequisite: Undergraduate preparation in Spanish. A study of the contrast between English and Spanish and of the techniques for comparing them.

**SP 524 Spanish/English Contrastive Linguistics.** (3 Hours) Prerequisite: Undergraduate preparation in Spanish. A study of the contrast between English and Spanish and of the techniques for comparing them.



**SP 539 The Contemporary Novel.** (3 Hours) The major Spanish novelists from the late 19th century to the present time, and the dynamics of their works.

**SP 543 New Visions of Reality—The Modern Spanish American Novel.** (3 Hours) A study of the novels that have been written in the last few years. The works of Garcia Marquez, Vargas Llosa, Rulfo and Fuentes will be emphasized.

**SP 544 Gaucho Literature.** (3 Hours) An analysis of the literature produced by and concerning the Gaucho. A comparison of the use of different genres to depict a way of life.

**SP 580 Independent Study.** (3 Hours) Intensive study of a subject selected in accordance with student needs. Topics will vary. May include civilization, techniques of literary analysis and criticism, study of major literary movements, individual authors and their works. Students will make periodic reports on their work and will prepare a substantial paper.

**SP 588 Master's Project.** (1-3 Hours)

**SP 590 Master's Thesis.** (1-6 Hours)

### General Foreign Languages Courses

Courses with the FLG prefix are primarily for students who have had little or no exposure to a foreign language, but who wish to pursue courses with foreign language or literary content. All courses in this section are taught in English.

**FLG 509 Methods and Materials for Intra-curricular Activities.** (3 Hours) Prerequisite: An undergraduate Methods course in foreign language or the 515 Methods course. Presentation of innovative techniques and activities in the language classroom in art, music, dancing, games, graphics, projects, drama, travel, etc. To be team-taught in English with extensive use of specialists and consultants. Cannot count toward any undergraduate degree program except by special departmental arrangement.

**FLG 555 Travel/Study Course in Language and Culture.** (3 or 6 Hours) For a student who wishes to become familiar with the culture of a foreign country before going on a trip to that country. Three hours credit to complete the reading list and three hours credit if the student takes a trip of at least one month in duration to an area or country which speaks that foreign language. Not restricted to foreign language majors.

**FLG 560 Special Studies in Modern Foreign Languages.** (1-6 Hours) Course designed to adapt to almost any problem of a student whose needs cannot be filled by existing arrangement of courses. May include study of language, literature, or culture. Emphasis on either oral, written, or reading aspects. Number of credit hours to be dependent on amount of work and research involved.

**EFL 581 English Communications.** (3 Hours) Prerequisite: The Graduate English Competency Examinations. (GECE) Credit for the course does not count toward a degree. The course focuses on the development of multiple communication skills among international students at the written and spoken levels. Students are exposed to the theories and practices of standard American English Competence through reading

comprehension and intra-cultural sociolinguistics. It is especially recommended for students with minimal proficiency in English.

**EFL 582 Advanced ESL Communications.** (3 Hours)

Prerequisite: Graduate English Competency Examination (GECE) passed of EFL 581 Advanced English as a Second Language (ESL) Communications is designed for international students who need extended training in the sociolinguistics of English and specific English pronunciations, intonations, stress patterns, syntax, & semantics. Write essays of narration, description, exposition, argumentation, and comparison/contrast. Other writing tasks will include activities in technical and professional writing. The purpose of the course is to accentuate the use of English to near native competence.

## DEPARTMENT OF JOURNALISM AND MEDIA STUDIES

Dr. Elayne Hayes-Anthony, Professor and Chair  
Mississippi e-Center, Box 2100  
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Jackson, MS 39204  
Telephone: (601) 979-1352  
Fax: (601) 979-5800  
e-mail: [jsumasscom@jsums.edu](mailto:jsumasscom@jsums.edu)

### Faculty

Dr. L. A. Chang, Assistant Professor

Dr. E. Hayes-Anthony, Professor

The Master's degree program in Mass Communications is offered for students who have a desire to develop those skills and attributes necessary for participation as media practitioners in the areas of News Editorial, Public Relations, Advertising, Broadcast Journalism or Production, and the concentration in Urban Communication. As the urban university of Mississippi, Jackson State University's Mass Communications program is uniquely positioned to provide graduate students working in the metropolitan area with late afternoon and evening courses tailored to meet professional requirements.

### Program Objectives

1. To aid students in developing a philosophical framework for understanding the communications theories and its societal impact.
2. To help students develop understanding in mass communication research and its applications.

- To guide students toward in-depth research reporting and advanced investigative journalism techniques.
- To assist students in enhancing their command of written communication capabilities.
- To utilize the critical thinking approach in problem solving, and in the dissemination of information on controversial issues.
- To help students with their practical knowledge in mass communication through the completion of final theses or projects.

MC 502	Mass Communication Advanced News Reporting	3
MC 506	Seminar-Urban Affairs Reporting	3
<b>Thesis Option</b>		
MC 599	Thesis Writing	3
<b>OR</b>		
<b>Non-thesis Option</b>		
MC 598	Independent Research Project	3

### Admissions Requirements

Applicants for the Master of Science degree must present a minimum grade point average of 3.00. Conditional admission requirements to the Master's program involve a grade point average of at least 2.50. Additional requirements include a 500 to 1,000 words written statement of purpose, three letters of recommendation, and resume. A TOEFL, ILETS or PTE-A score is required also for international students.

Upon admission the student should arrange for an interview with the chairperson of the Department of Journalism and Media Studies who will assign a permanent adviser.

Prerequisites for Applicants with a B.A., or B.S. degree in Mass Communications include taking an elementary statistics course unless the student has earned a grade "C" or above in a previous statistics course. If the student takes a graduate course in statistics, it will count in the 15 hours of electives. No credit will be given for undergraduate hours earned in Elementary Statistics.

### Degree Requirements

The Master of Science degree in Mass Communications requires a minimum of thirty (30) to thirty-three (33) semester hours of acceptable graduate credit with at least twenty-one to twenty-four (21-24) hours earned from Jackson State University. A thesis option requires a minimum of 30 hours. A non-thesis option requires a minimum of 33 hours. A thesis or non-thesis option is elected by the student. A creative research project such as a documentary, a series of videotaped public affairs programs, or a series of investigative reports, etc. is required of all students who select the non-thesis option. A final examination is required on all graduate work, including the thesis/creative project as applicable. A committee will be convened once the thesis or the creative research project is selected and the Graduate Area Comprehensive Examination (GACE) is passed. This committee will advise the student and assess the final product.

The thesis and non-thesis tracks in Mass Communications require the following core courses:

Core Courses	Title	Semester Hours
MC 500	Seminar in Mass Communications	3
MC 501	Research Methods in	3

<b>Electives*</b>	Electives or Restricted electives	15-18
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**Total Hours 30-33**

\*NOTE: Students are required to earn a B or above grade for each of the four core courses. The remaining 15-18 semester hours may be derived from the Mass Communications sequences in News Editorial, Public Relations, Advertising or Broadcast (Production or Journalism) or 9-12 semester hours may be selected from a Mass Communications sequence and 6 semester hours from graduate electives in related areas pending the adviser's approval.

- 1 If the Urban Communications Concentration is selected, 15 hours will be selected from the list of restricted electives.
- 1 If the non-thesis option is selected, the student must take 18 hours of electives.

### Concentration in Urban Communications

Select five (5) courses from the following group

ECO 544	Problems in State and Local Finance	3
ECO 556	Urban Economics	3
MC 527	Politics and the Press	3
PPAD 525	Urban Politics	3
PPAD 548	Public Administration	3
PPAD 551	Metropolitan Government and Politics	3
PS 522	Urban Management & Urban Services	3
BIO 501	Environmental Science	3
SOC 528	Urban Sociology	3
UA 545	Urban Planning	3

### DESCRIPTION OF COURSES

**MC 500 Seminar in Mass Communications.** (3 Hours) An intensive course in the origin, theories and influence of the mass media. Theoretical models and uses of mass communication in determining public policy, responses to pressure groups and media agenda setting will be examined and discussed.

**MC 501 Research Methods in Mass Communications** (3 Hours) Explores the quantitative and qualitative methodologies required to conduct research in news editorial, broadcast, public relations and advertising. Stresses content analysis, survey research, ratings research, and statistical analysis.

**MC 502 Advanced News Reporting.** (3 Hours)  
Prerequisite: MC 500 or consent of the instructor. Emphasis on investigative reporting, news analyses, environmental, scientific and business writing, etc.

**MC 503 Seminar in Mass Media Research.** (3 Hours)  
Prerequisite: MC 501 or equivalent. An advanced research course designed to apply the methodologies learned in MC 501.

**MC 506 Seminar-Urban Affairs Reporting.** (3 Hours)  
Prerequisite: MC 502 or consent of the instructor. Involves the selection and writing of news stories, features, and investigative reports generated in an urban setting. Topics include city government, transportation, inner city re-development, waste management, urban blight, crime, the performance of urban infrastructures such as the fire and police departments, etc.

**MC 508 Broadcast Journalism.** (3 Hours) Prerequisite: MC 500 or consent of the instructor. Examines newscasting, commentary, documentaries and elements of standup journalism for broadcast media.

**MC 509 Electronic Newsgathering.** Prerequisite: MC 500 or consent of the instructor. Examines the elements of gathering the news for broadcasts, including fieldwork utilizing camera and editing equipment.

**MC 520 Minorities and Women In Mass Media.** (3 Hours) Prerequisite: MC 500 or consent of the instructor. Profiles the careers of key individuals in the media. Examines legislation that aids or impacts negatively on the careers of women and minorities.

**MC 522 Television Production.** (3 Hours) Prerequisite: MC 500 or consent of the instructor. Examines the practical aspects of television production, planning, operation of camera, lights, audio components and direction.

**MC 526 Television Documentary.** (3 Hours) Prerequisite: MC 500 or consent of the instructor. Writing and video-taping with emphasis on form, function, and method.

**MC 527 Politics and the Press.** (3 Hours) Prerequisite: MC 501 or the consent of the instructor. Examines the print and broadcast coverage of political candidates and elected officials. Examines campaign rhetoric and television campaign ads from an ethical position. Describes the role and ethical dilemmas of press secretaries and public relations practitioners who are intimately involved in the political process. Involves extensive public opinion polling.

**MC 529 Legal and Ethical Aspects of Mass Communication.** (3 Hours) Prerequisite: MC 500. Studies the laws governing communications, focusing on the regulatory powers of agencies such as the FCC and FTC, the legal codes dealing with slander, libel and rights to privacy. Also examines the gray areas where both ethical and legal concerns may interface. Heavy emphasis is placed on "mapping" ethical decisions through the use of the Potter's Box.

**MC 530 Media Management.** (3 Hours) Prerequisite: MC 500 or consent of the instructor. Basic formats for operating a broadcast or print facility; management, programming, production, advertising sales, traffic and technical services.

**MC 532 International Journalism.** (3 Hours)  
Prerequisite: MC 500 or consent of the instructor. A comparative study of journalism in the world. Focuses on government restraints on the press and broadcast establishments in various nations; the varied perspectives offered on world events and the unique "gatekeeping" policies in various countries.

**MC 546 Studies in Film Criticism.** (3 Hours)  
Prerequisite: MC 500. Introduces a selected body of American and continental approaches to film aesthetics. Assesses trends in recent filmmaking.

**MC 547 Film as Social and Intellectual History.** (3 Hours) Prerequisite: MC 500 or consent of the instructor. Studies of Hollywood and underground/avant-garde attitudes toward themes and myths in the American experience such as capitalism, social reform, sexuality, male/female roles, etc.

**MC 550 Seminar: Communications Media and Issues In Society.** (3 Hours) Prerequisite: MC 501. Analysis of the contemporary posture of the media, nationally and internationally, as they have depicted events and influenced popular thought.

**MC 570 Writing for Public Relations.** (3 Hours)  
Prerequisite: MC 502 or consent of the instructor. Writing course designed to develop professional skills in preparing public relations materials such as annual reports, press releases for print and broadcast media, public service announcements, newsletters and financial reports.

**MC 571 Public Relations Practices.** (3 Hours)  
Prerequisite: MC 502 or consent of the instructor. Analysis and evaluation of internal and external public relations practices; management of public and employee information programs; and contemporary trends.

**MC 572 Corporate Communications.** (3 Hours)  
Prerequisite: MC 502 or consent of the instructor. An analysis of the scope and functions of institutional publications. Emphasis on interpersonal communication in the corporate setting; both verbal and non-verbal communication will be examined.

**MC 573 Advertising Campaigns.** (3 Hours)  
Prerequisite: MC 502 or consent of the instructor. Developing the advertising campaign from concept through development, execution and final evaluation.

**MC 598 Independent Research Project.** (3 Hours)  
Prerequisites: Twenty-four semester hours of graduate course credit. Research project in one or more of the media, directed by a major professor. (Non-thesis track)

**MC 599 Thesis Writing.** (3 Hours) Prerequisites: Twenty-four semester hours of graduate course credit. Thesis under the direction of a major professor.

## SCHOOL OF FINE AND PERFORMING ARTS

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### Department

#### ① Music

The Department of Music offers comprehensive programs in music leading to the Bachelor of Music, Bachelor of Music Education, and Master of Music Education degrees.

The Department of Music, as a unit within Jackson State University is a fully accredited member of the National Association of Schools of Music (NASM).

The Department of Music supports many performing ensembles, which include the “Sonic Boom of the South” Marching Band, University Choir, Chorale, Orchestra, Jazz Ensembles, Steel Pan, African Drum and Dance, and Opera Workshop among others. The Department of Music is located in the F.D. Hall Music Center, which houses a recital hall, rehearsal facilities, digital recording studio, and piano and electronic music technology labs. Our faculty members are highly qualified professional educators and musicians, including instrumentalists, vocalists, composers and conductors, trained at some of the most highly respected colleges and conservatories in the nation.

The graduate program leading to the Master of Music Education degree offers a curriculum aligned with the mission of the College of Liberal Arts and the University. The Master of Music Education degree is creatively designed and provides the graduate student with a comprehensive music education curriculum with options for study in a Thesis, Project, Recital or Extra Hours Plan.

### MISSION STATEMENT

The Department of Music is committed to providing the highest quality of educational opportunities in music education, performance, and technology by empowering a diverse population of students to develop technologically advanced with the skills required to assume leadership roles in music education, music industry, and related areas in the global market. The Department of Music offers courses and performance opportunities which broaden music education in the liberal arts and provides artistic enrichment for JSU students and faculty the University, Community, State and Nation while facilitating opportunities for artistic activism which begins to address the sociocultural inequalities and challenges of the world.

## DEPARTMENT OF MUSIC

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### Faculty

Dr. D. Akombo, Associate Professor

Dr. A. Duckett, Associate Professor

Dr. I. Elezovic, Associate Professor

Dr. L. Beckley-Roberts, Associate Professor

Dr. L. Galbreath, Assistant Professor

Dr. D. Mahloch, Instructor of Music

Dr. J. Mathena, Adjunct Professor

Dr. P. Rettger, Instructor of Music

Dr. R. Thomas, Jr., Professor

Dr. D. Ware, Visiting Assistant Professor

### Accreditation

The Master of Music Education degree program within Jackson State University is accredited by the National Association of Schools of Music (NASM), and the National Council for Accreditation of Teacher Education (NCATE).

### Program Objectives

Based upon the stated guidelines and standards of the National Association of Schools of Music (NASM), NCATE, the National Association for Music Educators (NAME) and "AA" Certification requirements of the State of Mississippi as stated in Bulletin 130, the Department of Music at Jackson State University offers graduate programs in Music Education which will prepare students to:

1. Raise the instructional competencies of music teachers in K-12 schools and junior colleges.
2. Meet the increasing demands, ever changing environments and growing needs of today's society for qualified music educators in early childhood, elementary, secondary and junior/community college levels.
3. Promote learning environments conducive to improving the instructional programs in music throughout the State of Mississippi.

The Master of Music Education program will:

1. Provide concentrated, advanced post-baccalaureate study in a major field or specialization in music.
2. Provide studies beyond the major, which support the major directly by developing a breadth of competence.
3. Improve the competencies of music students to become proficient performers of music in general, vocal, keyboard and instrumental areas.
4. Broaden the scope of graduate study and learning in music with particular reference to various idioms, styles, media, careers, and methodologies.

5. Provide historical, theoretical and technical bases for effective development of musicality on the graduate level.
6. Contribute to and participate actively in the cultural life of the University, area schools, and the community.

### Licensure

Candidates for the Master of Music Education Degree in the Department of Music at Jackson State University are required to complete a minimum of 36 credit hours.

The candidate has an option to complete one of the following plans of study: Thesis Plan, Project Plan, Recital Plan, and Extra Hours Plan. Students who complete this program are eligible for Class "AA" licensure from the Mississippi Department of Education to teach instrumental or vocal music in K-12 schools and community colleges. In addition, during the first year of graduate school, the candidate is encouraged to prepare and take PRAXIS CASE, Music PRAXIS II, PLT examinations and apply for the Music Endorsement Licensure with the Mississippi Department of Education.

### Admission Requirements

Full admission to the Master of Music Education degree program requires:

1. Undergraduate degree in Music (Bachelor of Music Education, BME; Bachelor of Music, BM; Bachelor of Science, BS; Bachelor of Arts, BA).
2. 3.00 Grade Point Average on a 4.00 scale
3. Satisfactory scores on the PRAXIS CASE and PLT examinations
4. 3 letters of recommendation
5. Personal interview/audition scheduled with the program coordinator/advisor
6. Entrance examinations in Music Theory, Music History and Music Education.

### Curricula for Master of Music Education Degree

Based on an individualized approach to instructional programming and the selection of a degree plan, a graduate student's program of study in music at Jackson State University is outlined according to one of the following plans:

### Degree Plans

Core courses required for area of concentration and each degree plan for all graduate students are:

1. Thesis Plan
2. Project Plan
3. Recital Plan
4. Extra Hours Plan

Core Courses	Title	Semester Hours
EDFL 514	Elementary Statistics	3
EDFL 515	Methods of Educational Research	3
EDFL 568	Curriculum Methods	3
<b>Total Core Hours</b>		<b>9</b>

### Degree Plans

#### Thesis Plan

MUS 511-534	Music Education Courses	12
MUS 540-545	Music Theory <i>and</i>	
MUS 560-573	Music History	9
MUS 591-596	Applied Music	1
MUS 575	Thesis Writing	3
	Electives	3
<b>Total Hours</b>		<b>36</b>

#### Project Plan

MUS 511-534	Music Education Courses	12
MUS 540-545	Music Theory <i>and</i>	
MUS 560-573	Music History	9
MUS 591-593	Applied Music	1
MUS 576	Project Writing	2
	Electives	3
<b>Total Hours</b>		<b>36</b>

#### Recital Plan

MUS 511-534	Music Education Courses	12
MUS 540-545	Music Theory <i>and</i>	
MUS 560-573	Music History	9
MUS 595-596	Applied Music	4
MUS 597	Recital	2
<b>Total Hours</b>		<b>36</b>

#### Extra Hours Plan

MUS 511-534	Music Education Courses	12
MUS 540-545	Music Theory Courses	6
MUS 560-573	Music History Courses	6
MUS 591-596	Applied Music Courses	3
<b>Total Hours</b>		<b>36</b>

### Suggested Curricular for Concentrations

Concentrations are available in:

1. Elementary School Music Education
2. Secondary School Music Education (choral, instrumental, general);
3. Junior College Music Education (choral, instrumental or general); and
4. Comprehensive Music Education.

Courses and the appropriate number of hours are determined in conference with graduate advisers in accordance with the degree plan selected.

In graduate music lecture classes, one semester hour of credit equals one hour of class instruction and at least two hours of work outside of class for 15 weeks. Additionally, in graduate music recitals, two semester hours of credit equals one hour of applied instruction and at least two hours of work outside of class for 15 weeks. Likewise, in applied graduate music classes, two semester hours of credit equals one hour of applied instruction and at least two hours of work outside of class for 15 weeks.

### DESCRIPTION OF COURSES

**MUS 511 Special Problems in Teaching Music I-II.** (3 Hours) Class and individual study of problems and

opportunities faced by teachers of music. For classroom teachers, music teachers and supervisors, principals and administrators.

**MUS 512 Musical Aesthetics and Music Education.** (3 Hours) Theories of philosophers, psychologists and musicians from antiquity to the present time related to the justification, values and practices of Music education in everyday life.

**MUS 513 Bibliography and Research Methods.** (3 Hours) Survey of fields of historical and systematic investigation in music; bibliographical studies and research analysis.

**MUS 514 Advanced Conducting.** (3 Hours) Conducting the concert band, the symphony orchestra, and the chorus in the larger Musical forms. Analysis of scores, recordings, and live performances. Emphasis on style, technique and interpretation.

**MUS 515 Choral Literature and Techniques.** (3 Hours) Survey and analysis of choral literature from Palestrina to the present, using scores, records, and class performance. Techniques of teaching and conducting unfamiliar styles.

**MUS 516 Instrumental Literature and Techniques** (3 Hours) Specific and intensive research in each student's major instrument, covering: (1) history of the instrument, (2) texts, methods and periodicals, (3) orchestral studies, (4) solo and ensemble techniques and literature, and (5) listening and performance.

**MUS 517 Marching Band Techniques.** (3 Hours) Organization, developing system, equipment and facilities, personnel, planning the show, basic styles and fundamentals, continuity and pace, rehearsal and drill techniques, charting, instrumentation, selecting and arranging music.

**MUS 518 History and Philosophy of Music Education.** (3 Hours) Examination of the historical and philosophical foundations, which underlie the curricula and instructional programs in music.

**MUS 519 Survey of Research In Music Education.** (3 Hours) Designed to help students to develop the scientific method of educational research in music, to define areas of need, and to develop potential research problems.

**MUS 520 Introduction to Music Technology.** (3 Hours). An introduction to computers and computer software used to teach, compose and arrange music. This course will cover the tools essential for success as a music educator in today's secondary school systems. Topics to be examined will include in-depth discussions and hands on experience with MIDI sequencing, notation, history, music theory and marching band drill software. The history of music technology and its' relevance to today's musician will be given priority.

**MUS 521 Curriculum Development for Music In the Elementary School.** (3 Hours) Study and appraisal of curricula, plans and materials for the sequential development of musical learning in children; contemporary techniques for implementing; relationships to other areas of instruction.

**MUS 522 Curriculum Development for Music In the Secondary School.** (3 Hours) Study of general and

specialized curricula in the junior and senior high school; interrelationships, goals, and implementation techniques in the light of musical growth in the adolescent years.

**MUS 523 Curriculum Development for Music in Two and Four Year Colleges.** (3 Hours) Study of curricula, plans, materials, and implementation procedures for general and specialized curricula in junior and senior colleges. Emphasis on theories and practices, student development, administrative processes, and teacher competency.

**MUS 524 Music in Childhood Education.** (3 Hours) A detailed consideration of the music program for nursery school through the primary grades. The nature of musical responses, objectives, experience levels, and materials and techniques utilized.

**MUS 525 Tests and Measurement in Music Education.** (3 Hours) Investigation of evaluative tools in music education; formulation and utilization of measurement devices in music teaching and research.

**MUS 526 Administration and Supervision of Music.** (3 Hours) An integrating course involving the administrative consideration basic to all facets of music education programs in K-12, and junior and senior colleges.

**MUS 527 Projects In Elementary Music Curricula Development, Implementation and Supervision.** (3 Hours) Basic curriculum principles, program planning and development, preparation and presentation of courses in selected classrooms. An in-depth course employing the processes of lecture, seminar, and practicum.

**MUS 528 Projects In Secondary Music Curriculum Development, Implementation and Supervision.** (3 Hours) Basic curriculum principles, program planning and development, preparation and presentation of courses in selected classrooms. Provision for individual projects in general, choral or instrumental areas.

**MUS 529 The Church and Music Education.** (3 Hours) A comprehensive program constructed to enable the church musician to study materials, methods, and activities and to present programs specifically designed to educate the taste of various congregations.

**MUS 530 Jazz Music Workshop.** (2 Hours) Discussions and demonstrations relative to the historical, theoretical, and performance areas of jazz. The various styles and the music of a variety of composers will be explored. Sessions on career opportunities and recording studio techniques.

**MUS 531 Vocal Pedagogy** (3 Hours) Processes in voice production. Psychological, physiological, and acoustical problems. Study of voice classification, quality, diction, breath support and breath control.

**MUS 532 Piano Pedagogy.** (3 Hours) Survey of techniques, practices, and materials for group and individual instruction for various age levels. Teaching under faculty supervision.

**MUS 533 Instrumental Pedagogy.** (3 Hours) Teaching techniques and materials for string, woodwind, brasswind and percussion instruments. Individual and group instruction for various age levels. Teaching under faculty supervision.

**MUS 534 Music in Special Education.** (3 Hours) Survey of materials for teaching music to the handicapped. Analysis of psychological principles and procedural concepts, development of pilot programs for music teaching and learning in special education.

**MUS 535 Discovery-Inquiry Approach to Musical Learning.** (3 Hours) Integrative and individualized approach to teaching music to pre-school and elementary school children. Study of concepts, methods, materials and experience.

**MUS 536 Church Music Workshop.** (1 Hour) Rehearsal procedures, reviewing literature of the past and present, philosophies of church music as well as liturgies will be studied. Planning a program that is flexible and dynamic, as well as contemporary trends will be covered.

**MUS 537 Seminar in Church Music.** (3 Hours) Study of the relationship of music and liturgy to Christian worship, how to plan the comprehensive church music program, selecting appropriate music for worship and the calendar year, building and maintaining an adequate choir, and how to utilize instruments in the worship service.

**MUS 539 Independent Study** (2 hours) Individual program of study in major area of interest, under the direction of the faculty. Opportunities to broaden knowledge and develop further skills in special areas of music.

**MUS 540 Music Theory Review** (2 Hours) Designed to prepare students for graduate level theory. Aural techniques, triads, chordal structure, modulation, analysis, harmonic and contrapuntal techniques. Credit not applied to degree requirements.

**MUS 541 Theory I.** (3 Hours) Basic principles of music theory. Emphasis on sixteenth and seventeenth century styles. (Sum.)

**MUS 542 Theory II.** (3 Hours) A study of the styles of the eighteenth and nineteenth centuries.

**MUS 543 Theory III.** (3 Hours) A study of impressionistic and modern styles.

**MUS 544 Analytical Techniques.** (3 Hours) Techniques of analysis of style and structure of music from all periods of music history. Analytical concepts in learning, teaching, and performing music.

**MUS 545 Pedagogy of Theory.** (3 Hours) Teaching materials, text, classroom procedure, methods, and sequence. Introduction to the contemporary music project (CMP) approach. Study of the theoretical systems and theoretical bibliography.

**MUS 546 Advanced Ear Training.** (3 Hours) Harmonic, contrapuntal, and melodic dictation drawn from masterworks and idioms of composers from Haydn to the present. Employment of all clefs. Sight singing.

**MUS 547 Advanced Orchestration.** (3 Hours) Investigation of orchestration practices of the great composers from the classical period to the present. Non-orchestral works will be orchestrated in the style of the period of their composition.

**MUS 548 Advanced Band Instrumentation.** (3 Hours) Arranging for the concert and marching band works from orchestra, organ, chamber and/or popular music by

composers of the classical, romantic, and modern periods.

**MUS 549 Composition III.** (3 Hours) Advanced study of contrapuntal forms, study of contemporary melodic and harmonic practices; original work in advanced composition.

**MUS 550 Instrumental Forms.** (2 Hours) The evolution of the sonata, the symphony and the concerto. Historical/analytical/theoretical approaches.

**MUS 551-552 Arranging for School Band, Chorus, and Orchestra I, II.** (3-3 Hours) The technique of arranging for band, chorus and orchestra within the skill limits of school performances, skill levels according to school grade and integration of all levels in a composite school performing unit.

**MUS 553 Jazz Analysis I.** (3 Hours) Analysis of scale systems and harmonies used in jazz improvisational techniques and stylistic analysis of major artists in the 1940's and the 1950's.

**MUS 554 Jazz Improvisation.** (3 Hours) Continuation of Jazz Analysis I with emphasis on improvisational techniques and stylistic analysis of major jazz artists of the 1960's and 1970's.

**MUS 555 Music as a Business** (3 Hours) Designed to show students how to make a good living with music. Presentations in sound business-like manner in relationship to career opportunities. Lectures by guest consultants in the business of music. Panel discussions on career opportunities in the field of music. Visits to recording studios will be included.

**MUS 557 Orff-Schulwerk Level I.** (3 Hours) Basic knowledge and pedagogic foundations in the Orff-Schulwerk approach. A complete introductory course based on Level I course outlines as published by the American Orff-Schulwerk Association which includes the use of the pentatonic, the simple bordun, the ostinato, basic elemental forms, basic body movements and application to the Schulwerk; soprano recorder; vocal and rhythmic training; and improvisation.

**MUS 558 Orff-Schulwerk Level II (Intermediate).** (3 Hours) Satisfactory completion of Orff-Schulwerk Level I course. Study of all the pentatonic scales; review of simple and moving borduns; I-V and I-IV-V accompaniments; explanation of rhythmic training and continuation into irregular rhythms and meters; vocal, movement and instrumental improvisation; soprano and alto recorder. Level II includes in- depth study of Volumes II and IV of the Schulwerk.

**MUS 560 General History of Music.** (2 Hours) Study and review of forms, styles, literature and composers from Middle Ages to modern period. To prepare students for graduate level history. Credit not applied to degree requirements.

**MUS 561 Baroque Music.** (3 Hours) The age of the basso continuo 1580-1750; opera and oratorio, instrumental forms, keyboard music, and performance practices.

**MUS 562 Classic Music.** (3 Hours) Rococo and Pre-classical music in England, France, Italy, Spain, and Germany. The Viennese classical tradition.

**MUS 563 Romantic Music.** (3 Hours) The development of romanticism in music from late Beethoven through Mahler.

**MUS 564 Medieval Music.** (3 Hours) The history of music from classical antiquity to C. 1400.

**MUS 565 Renaissance Music.** (3 Hours) The history of music from 1400 to 1600.

**MUS 566 Music in the Twentieth Century.** (3 Hours) The history of music from the turn of the century to the present. Forms, styles, idioms, media, composers, and performance practices.

**MUS 567 Studies In Music History.** (3 Hours) Topics may be selected from the following: Sonata History; Opera History; 19th Century Art Song; Cantata History; Symphony History; Brahms; Mozart; Bach; Beethoven; Debussy-Ravel; Jazz History; Ethnomusicology.

**MUS 568 Introduction to Ethnomusicology.** (3 Hours) A comprehensive survey of concepts, problems and methods of research in non-Western and folk music.

**MUS 569 History of Instrumental Music from 1450 to 1750.** (3 Hours) A comprehensive study of instruments and instrumental music, both Western and non-Western, from the Middle Ages to the end of the Baroque era. (Sum.)

**MUS 570 Chamber Ensemble.** (1 Hour) Performance of chamber music in various styles, periods and media. Open to pianists, instrumentalists, and singers with technical proficiency equivalent to undergraduate senior level. Public performance each quarter.

**MUS 571 Vocal Literature.** (3 Hours) Study of solo song in larger works, and solo art song. Analysis, performance and collateral reading.

**MUS 572 Wind Instrument Literature.** (3 Hours) Survey of solo and ensemble wind including analysis, collateral reading and performance.

**MUS 573 Jazz History.** (3 Hours) Study of the development of jazz from African origins to its present status as an organized art form. Contributions of selected jazz musicians. Relationship to rock and pop music.

**MUS 575 Thesis Writing.** (2 Hours)

**MUS 576 Project Writing.** (2 Hours)

**MUS 577 Seminar in Band Conducting.** (4 Hours) An intense study of the essentials of band conducting with appropriate practical experience instrumental and band performance ensembles.

**MUS 578 Seminar in Orchestral Conducting.** (4 Hours) An intense study of the essentials of orchestral conducting with appropriate practical experience with string and orchestral ensemble performance ensembles.

**MUS 579 Seminar in Choral Conducting.** (4 Hours) An intense study of the essential of conducting with appropriate practical experience with vocal performance ensembles.

**MUS 581 Marching Band.** (1 Hour) Designed to give graduate students lab experience in dealing with contemporary marching band techniques. Open to all students upon audition.

**MUS 582-584 Concert Band.** (1 Hour) An organization designed to provide a graduate medium, the aim of which is to broaden the graduates' realm of experiences in performing with large performance organizations and to

enhance understanding and knowledge of the literature and concert performance practices.

**MUS 585-587 Orchestra.** (1 Hour) Designed, through performance, to instill in student's knowledge of musical literature from all periods and idioms, basic music patterns and usages, musical vocabulary and meaning, music's development as an art, and the principal forms and composers.

**MUS 588-590 Choir.** (1 Hour) Study and performance of selected choral literature from all stylistic periods, both accompanied and a cappella. Emphasis on increased skill in reading, development of basic voice techniques and interpreting the score.

**MUS 597 Recital.** (2 Hours) Graduate level technical study, continued development of repertoire, stylistic interpretation and performance skills. Preparation and presentation of graduate recital.

**MUS 598-599 Woodwind Ensemble.** (1 Hour) Exploration of the finest in woodwind ensemble literature with emphasis on the individual performer.

**MUS 598-599 Brasswind Ensemble.** (1 Hour) Performance of brass ensemble literature of all periods and styles. Open to all students by audition.

**MUS 598-599 Percussion Ensemble.** (1 Hour) Designed to acquaint each student with the art of playing as a unit and to have each music major work toward the development of being able to perform on melodic and non-melodic percussion instruments.

**MUS 598-599 String Ensemble.** (1 Hour) Study and performance of standard ensemble literature. Open to qualified students.

**MUS 598-599 Stage Band.** (1 Hour) An organization designed to acquaint the student with styles, techniques, and works of prominent jazz figures. Special attention will be given to improvisatory expressions of individual students.

**\*Applied Music\***

Course	Title	Semester Hours
MUS 591-596	Applied Piano	1-3
MUSO 591-596	Applied Organ	1-3
MUSV 591-596	Applied Voice	1-3
MUSN 591-596	Applied Violin.	1-3
MUSA 591-596	Applied Viola	1-3
MUSI 591-596	Applied Violoncello	1-3
MUSS 591-596	Applied String Bass.	1-3
MUSF 591-596	Applied Flute.	1-3
MUSZ 591-596	Applied Oboe.	1-3
MUSB 591-596	Applied Bassoon	1-3
MUSC 591-596	Applied Clarinet	1-3
MUSX 591-596	Applied Saxophone.	1-3
MUST 591-596	Applied Trumpet	1-3
MUSH 591-596	Applied French Horn.	1-3
MUSR 591-596	Applied Trombone	1-3
MUSE 591-596	Applied Baritone Horn	1-3
MUSU 591-596	Applied Tuba	1-3
MUSP 591-596	Applied Percussion	1-3
MUS 597	Recital	2



## SCHOOL OF SOCIAL AND BEHAVIORAL SCIENCES

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### Departments

- ① Criminal Justice and Sociology
- ① History and Philosophy
- ① Political Science
- ① Psychology

The School of Social and Behavioral Sciences consists of leaders in graduate education at Jackson State University. Academic units comprising the School of Social and Behavioral Sciences are the Department of Criminal Justice and Sociology, the Department of History and Philosophy, the Department of Political Science, and the Department of Psychology.

In addition to the four academic units shown above, students and faculty participate in several interdisciplinary research and citizenship programs - two centers, the Margaret Walker Alexander National Research Center for the Study of the Twentieth Century African American, spawned from the Department of History; the Alcohol and Drug Studies Center; whose genesis was the Department of Sociology; a planned program of research for the Department of Psychology, the Community Health Program (CHP) and a Clinical Psychology Services Program; and the Fannie Lou Hammer National Institute on Citizenship and Democracy, which grew out of more than a quarter of a century of activity by the faculty of the Department of Political Science.

The aforementioned four units, their programs of teaching, research and service, attract a substantively diverse and international faculty and student body. All graduate programs in the social and behavioral sciences maintain an optimal student enrollment and provide excellent mentoring by core faculty with combined research and practitioner experiences in traditional academic specializations and public service roles. Graduate students are expected to meet with their mentors many times during the course of the academic year and are encouraged to begin research projects with their mentor the summer preceding their admission. Graduate coursework, preliminary examinations, qualifying examinations, internships, thesis and/or major papers, and dissertation preparation, are the major components of the graduate programs in the School of Social and Behavioral Sciences. The College of Liberal Art's only doctoral program - Clinical Psychology - has an excellent teaching faculty with planned programs of clinical research. The social and behavioral sciences have engaged teaching faculty with quality research publications. The School of Social and Behavioral Sciences generates large sums of external funds to support graduate student fellowships, foster research opportunities that advance student's careers, generate new knowledge/discoveries in collaboration with graduate students.

The School of Social and Behavioral Sciences offers the Doctor of Philosophy in Clinical Psychology; the Master of Arts in Criminal Justice and Justice Services, History, Political Science, and Sociology.

### DEPARTMENT OF CRIMINAL JUSTICE AND SOCIOLOGY

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#### Faculty

Dr. E. Morgan, Associate Professor

Dr. T. Kersen, Associate Professor

Dr. C. McNeil, Professor

#### Program of Criminology and Justice Services

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The Master of Arts degree in Criminology and Justice Services is designed to create a cadre of education and policy makers in the area of Criminal Justice. The primary focus of the program is on providing a strong theoretical and methodological foundation for those individuals desiring to restructure and plan for change in the contemporary justice system. The student is expected to demonstrate knowledge of the key theories as well as critical theoretical crime and justice perspectives within the progression of the humanistic spectrum. The curriculum includes significant strategies, issues and themes on the dimensions of planned change throughout the justice system.

#### Program Objectives

- ① To prepare students for studies beyond the master degree focusing on planned change.
- ① To provide studies in theory, analysis of varied criminal justice systems, management and research sufficient to prepare students for career development in the field.
- ① To provide courses to enhance the performance and employment potential of individuals in criminal justice agencies.

#### Admission Requirements

Students must meet all admission, testing and graduation requirements of the Graduate School at Jackson State University. Students must submit a satisfactory score on the Graduate Record Examination, GRE, three letters of recommendation and a statement of purpose.

Students without a background in Criminal Justice, Criminology, Juvenile Justice or Administration of

Justice must take competency courses before taking courses in the degree program.

**Applicants will only be admitted once a year during the Fall Semester. The department requires that students have a 3.0 grade point average.**

**Transfer Credits**

A maximum of nine (9) hours of credit may be transferred from an accredited graduate school provided the courses are significantly related to those required for the M.A. in criminal justice and the student has approval from the director of the program.

**Degree Requirements**

The Department offers two-degree options at the Masters' level: THESIS and NON-THESIS.

1. THESIS: A total of 36 semester hours are required for the M.A. Each student must complete twelve (12) semester hours of core courses, eighteen (18) semester hours of criminal justice electives and six (6) semester hours of thesis writing. A written comprehensive examination must be taken **and successfully passed** following the completion of the core courses. A student must write and defend a thesis to the Thesis Committee for approval.
2. NON-THESIS: A total of 36 semester hours are required for the M.A. Each student must complete twelve (12) semester hours of core courses, twenty-one (21) semester hours of criminal justice electives and three (3) semester hours of writing a policy paper. A written comprehensive examination must be taken **and successfully passed** following the completion of the core courses.

**Master of Arts  
Criminology and Justice Services  
(Thesis Option)**

Course	Title	Semester Hours
CJS/SOC 502	Theoretical Criminology	3
CJS/SOC 513	Statistics	
CJS 515	Research Methods	3
CJS 526	Criminal Justice Organization and Management	3
	Criminal Justice Electives	18
CJS 600	Thesis	6
<b>Total Hours</b>		<b>36</b>

**Master of Arts  
Criminology and Justice Services  
(Non-Thesis Option)**

Course	Title	Semester Hours
CJS/SOC 502	Theoretical Criminology	3

CJS/SOC 513	Statistics	
CJS 515	Research Methods	3
CJS 526	Criminal Justice Organization and Management	3
	Criminal Justice Electives	18
CJS 601	Policy Paper	6
<b>Total Hours</b>		<b>36</b>

**Criminal Justice Electives**

CJS 520	Ethical Issues in Criminal Justice	
CJS 525	Designing New Criminal Justice Delivery Systems	
CJS 530	Implementing Behavioral Strategies for Planned Change	
CJS 535	Assessment and Evaluation of Criminal Justice Policies and Practices	
CJS 540	Comparative Justice Systems	
CJS 580	Special Topics	
CJS 599	Independent Study	
CJS/SOC 504	Sociological Jurisprudence	
CJS/SOC 506	Seminar in Juvenile Justice	
CJS/SOC 591	Seminar in Police Administration	
CJS/SOC 620	Community Analysis	
CJS/SOC 622	Research and Statistics	
CJS/SOC 635	Crime and Urban Community	

**Sociology Program**

The Sociology program offers the Master of Arts Degree in Sociology and the Master of Arts Degree in Sociology with emphasis in Alcohol and Drug Studies.

**Mission**

The missions of the department are to provide learning experiences that will enable the sociology student to analyze, synthesize, and evaluate sociological concepts and research. Marketable skills such as effective written and oral communication, problem solving, and familiarity with quantitative and qualitative methodologies will be emphasized. Students will learn to use their sociological imagination to study emerging social issues such as globalization and modernization. Students will these skills are highly sought after in various parts of the labor market such as social service agencies, correctional systems and research institutions. The M.A. program is also designed to provide adequate training to pursue a doctoral program at other universities. The M.A. in Sociology with Emphasis in Alcohol and Drug Studies Program is designed to develop a manpower pool for service delivery in the human services profession with emphasis on the training of alcohol and drug counselors. This program also provides planning, management and public information expertise to the general public. Specialists in the field of substance abuse and human services engaged in the applied research develop and test theories on the nature and extent of alcohol and drug abuse problems.

### Program Objectives

The purposes and intent of the graduate programs in Sociology are careers and human services oriented. As such, the objectives are to:

- ❶ Use the social scientific approach to study problems and locate possible solutions.
- ❷ Provide ample opportunities for students to write and present research from a sociological perspective.
- ❸ Challenge students to analyze, synthesize, and evaluate sociological concepts and theories.
- ❹ Familiarize students about quantitative, qualitative and mixed-method approaches.
- ❺ Prepare teachers for community colleges or further graduate studies.
- ❻ Prepare counselors for Alcohol and Drug abuse centers and programs.

### Admission Requirements

The program for the Master of Arts Degree in Sociology is open to those who have completed the Bachelor of Arts Degree in Sociology or its equivalent from an accredited institution. All applicants are required to submit a satisfactory score on the Graduate Record Examination (GRE), three letters of recommendation and a statement of purpose. Students without a background in Sociology must take competency courses before taking courses in the degree program.

**Applicants will only be admitted once a year during the Fall Semester. The department requires that students have a 3.0 grade point average.**

### Degree Requirements

The Department offers two-degree options at the Masters' level, THESIS and NON-THESIS.

1. THESIS: A total of 36 semester hours are required for the M.A. Each student must complete 24 semester hours of core courses, six (6) semester hours of electives, and six (6) semester hours of thesis writing. A written comprehensive examination must be taken **and successfully passed** following the completion of the core courses. A student must write and defend a thesis to the Thesis Committee for approval.
2. NON-THESIS: A total of 36 semester hours are required for the M.A. Each student is required to complete 15 semester hours of core courses, 6 semester hours of electives in the field and 15 hours of general electives (500 level). A written comprehensive examination must be taken **and successfully passed** following the completion of core courses.

#### Master of Arts – Sociology (Thesis Option)

Course	Title	Semester Hours
SOC 505	History of Sociology	3
SOC 507	Recent Sociological Theory	3
SOC 512	Methods of Social Research	3

SOC 513	Statistics	3
SOC 622	Research and Statistics	3
SOC 600	Master's Thesis	6
	Electives (500 Level)	15
	<b>Total Hours</b>	<b>36</b>

#### Master of Arts - Sociology with Concentration in Alcohol/Drug Studies

Core Courses	Title	Semester Hours
SOC 503	History and Philosophy of Substance Abuse	3
SOC 513	Statistics	3
SOC 550	Methods of Social Research and Evaluation	4
SOC 588	Interventive Methods I	3
SOC 590	Practicum	5
SOC 600	Master's Thesis	6
HED 500	Introduction to Alcohol/Drug Abuse	3

#### Special Skills Area (Select one Track)

##### COUNSELING

SOC 589	Interventive Methods II	3
COUN 520	Principles of Counseling	3
COUN 526	Dynamics of Group Counseling	3

##### PLANNING AND ADMINISTRATION

SOC 620	Community Analysis	3
MNGT 502	Human Relations and Organizational Behavior	3
COUN 517	Lifestyles and Career Development	3

##### PUBLIC INFORMATION

SOC 620	Community Analysis	3
MC 571	Public Relations Practices	3
COUN 517	Lifestyles and Career Development	3
	<b>Total Hours</b>	<b>36</b>

#### Master of Arts – Sociology (Non-Thesis Option)

Core Courses	Title	Semester Hours
SOC 505	History of Sociology	3
SOC 507	Recent Sociological Theory	3
SOC 512	Methods of Social Research	3
SOC 513	Statistics	3
SOC 622	Research and Statistics	3
SOC	Electives	6
	Electives (500 level)	15
	<b>Total Hours</b>	<b>36</b>

#### Master of Arts - Sociology with Concentration in Alcohol/Drug Studies (Non-Thesis Option)

Core Courses	Title	Semester Hours
SOC 503	History and Philosophy of Substance Abuse	3
SOC 513	Statistics	3

SOC 538	Social Psychology of Deviant Behavior	3
SOC 588	Interventive Methods I	3
SOC 590	Practicum	5
SOC 592	Crime and Substance Abuse	3
HE 600	Public and Community Health	3
HED 500	Introduction to Alcohol/Drug Abuse	3
<b>Special Skills Area (Select one Track)</b>		
<u>COUNSELING</u>		
SOC 589	Interventive Methods II	3
COUN 517	Lifestyles and Career Development	3
COUN 520	Principles of Counseling	3
COUN 526	Dynamics of Group Counseling	3
<u>PLANNING AND ADMINISTRATION</u>		
SOC 589	Interventive Methods II	3
COUN 517	Lifestyles and Career Development	3
SOC 620	Community Analysis	3
MNGT 502	Human Relations and Organizational Behavior	3
<u>PUBLIC INFORMATION</u>		
SOC 589	Interventive Methods II	3
COUN 517	Lifestyles and Career Development	3
SOC 620	Community Analysis	3
MC 571	Public Relations Practices	3
		<b>Total Hours 36</b>

## DESCRIPTION OF COURSES

### Criminal Justice

**CJ 500 System Dynamics in the Administration of Justice** (3 Hours) This course is designed for students without a criminal justice or closely related discipline background. Students will examine the components of the criminal justice system and their impact on the lives of offenders and non-offenders. This course does not count toward degree credit (D).

**CJ/SOC 502 Theoretical Criminology** (3 Hours) An intense overview of the major theories of crime and delinquency from the 18th century to the present. (F)

**CJ 515 Research Methods** (3 Hours) This course is designed to assist the student to understand and execute the basic research processes and judge the worthiness and usefulness of research as a knowledgeable consumer. (F)

**CJ 520 Ethical Issues In Criminal Justice.** (3 Hours) An analysis of the impact of federal and state laws, court decisions and moral and ethical factors associated with the delivery of service in the criminal justice system. (S)

**CJ 525 Designing New Criminal Justice Delivery Systems.** (3 Hours) This course focuses on creating new approaches to the delivery of human services. Special consideration will be given to the history of human service work, the process of getting services to people in need, helping consumers to function more effectively

and the management of work to deliver effective and efficient services. (S)

**CJ 526 Criminal Justice Organization and Management** (3 Hours) Prerequisite: CJS/SOC 502. Theories of Crime and Delinquency. This course focuses on the application of organization and administration principles to law enforcement, courts, and correctional settings. There will also be a review of theories and an assessment of trends. (F)

**CJ 530 Implementing Behavioral Strategies for Planned Change.** (3 Hours) This course is designed to develop a system for organizing and conceptualizing crime prevention efforts. Special consideration is given to crime prevention planning, programming and assessment. (S)

**CJ 535 Assessment and Evaluation of Criminal Justice Policies and Practices.** (3 Hours) This course will focus on developing assessment skills and conveying the evaluative information to the appropriate audience. Special consideration is given to the ability of the learner to determine and judge the value and effectiveness of a particular policy or system relative to its purpose and goals. (F)

**CJ 540 Comparative Justice Systems** (3 Hours) This course is a survey of various international criminal justice systems. Special emphasis will be placed on historical, geographical, and cultural perspectives that impact the systems unique and/or similar to those in the United States. (S)

**CJ 580 Special Topics** (3 Hours) An exploration of critical issues in criminal justice. Course may be repeated for credit, as topics will vary each semester. (D)

**CJ 599 Independent Study.** (3 Hours) This course is designed to permit students to research topics not covered in other criminal justice courses. (D)

**CJ 600 Thesis.** (3-6 Hours) The candidate for the Master of Arts degree must present a thesis based on research conducted, stipulated, and approved by an advisor. (D)

**CJ 601 Policy Paper** (3 Hours) Students who select the non-thesis option are required to select a criminal justice policy and research it. The student should provide a thorough analysis of the policy resulting in the policy paper. (D)

**CJ 602 Departmental Comprehensive Examination (1 Hour)** This course is for students who have completed all coursework and need to be enrolled in order to take the area comprehensive examination.

### Sociology

**CJ/SOC 502 Theoretical Criminology** (3 Hours) An intense overview of the major theories of crime and delinquency from the 18th century to the present. (F)

**SOC 503 History and Philosophy of Substance Abuse** (3 Hours) Background information on society's management over time of alcohol and other substances and the effects of their use, with emphasis on philosophical orientations underlying the management strategy. (F)

**CJ/SOC 504 Sociological Jurisprudence** (3 Hours) Intensive study of the historical development of current status of constitutional doctrine in relation to the

administration of justice by utilizing the options of the U.S. Supreme Court as the basis for equal protection, police practices and the fundamental rights guaranteed in the Bill of Rights. Federal and State constitutional laws as they relate to the criminal justice system. (F)

**SOC 505 History of Sociology.** (3 Hours) Analysis of the works of major contributors to classical sociological theory, e.g., Durkheim, Weber, Merton, Parsons, and an examination of the ways in which their work converges to form a cumulative body of sociology theory. (F)

**CJ/SOC 506 Seminar in Juvenile Justice** (3 Hours) Administrative, management, supervisory, policy, and legal aspects of the juvenile justice system; problems of manpower training and development; planning, program evaluation, and management strategies related to juvenile courts; community diversion and correctional programs and institutions; recent court decisions and legal standards. (S)

**SOC 507 Recent Social Theory.** (3 Hours) Nineteenth and 20th century sociological theory. Contemporary theoretical thought is studied and applied to contemporary issues such as modernity and globalization. (S)

**SOC 508 Current Issues In Law Enforcement** (3 Hours) Police-management problems; organization and objectives, planning and coordination, public relations and support. (D)

**SOC 512 Methods of Social Research.** (3 Hours) A course which covers methodology and techniques for selection and formulation of a research problem, research design, questionnaire and schedule construction, proposal writing. (F)

**CJS/SOC 513 Statistics.** (3 Hours) Quantitative techniques of data analysis are introduced in the context of their application in sociological research. Research design, measurement theory, data collection, coding, machine use, and statistical analysis and interpretation are stressed. (S)

**SOC 515 Legal Aspects of Corrections** (3 Hours) Functions, powers, procedures and legal limitations germane to correctional administration with particular emphasis on those operating in the criminal justice field. (D)

**SOC 523 Seminar—Family and Marriage with Special Emphasis on the Black Family.** (3 Hours) Varying forms and functions of family organizations in different societies. Family relations and personality formation. Contemporary social changes influencing family life, with special emphasis on the Black family. (S)

**SOC 525 Correctional Treatment and Rehabilitation** (3 Hours) The study of the process of rehabilitating adult and juvenile offenders in prisons, jails, detention centers, and reform schools. Includes an analysis of offender classification schemes, the major institutional treatment programs and strategies. (D)

**SOC 526 Seminar in Race Relations and Minorities.** (3 Hours) Sociological examination of relationship between and within racial groups; analysis of social causes of prejudice and discrimination. (F)

**SOC 535 Understanding the Role of Various Disciplines in the Study of Urban Problems.** (3 Hours)

Students will undertake projects correlating the contributions made by various disciplines to the solution of urban problems. (D)

**SOC 538 Social Psychology of Deviant Behavior.** (3 Hours) An intensive examination of the concept of deviant behavior and associated concepts, e.g., alienation, abnormality, anomie, pathology, marginality. (Su, D)

**SOC 543 Stress Management in Justice Administration** (3 Hours) Provides criminal justice personnel with a bio-social framework or model to identify specific stresses peculiar to law enforcement work and develop adaptive mechanisms to mediate stress and alleviate the psychological effects of stress. (D)

**SOC 548 Social Change.** (3 Hours) Reform, revolution and involvement. (Sum)

**SOC 550 Methods of Research and Evaluation** (4 Hours) This course is designed to increase the student's skills in formal research and report writing and in drawing up empirical indicators for use in program evaluation. Practical application of skills developed in the course will be required in evaluation activities carried out during the formulation and actual fielding of a research project to be reported in the Masters' thesis. (F)

**SOC 588 Interventive Methods I.** (3 Hours) Strategies, techniques and approaches to the intervention, redirection and amelioration of substance misuse behavior with special emphasis on individual, group and community organization foci. (F)

**SOC 589 Interventive Methods II.** (3 Hours) Prerequisite: SOC 588. Advanced study of interventive methods with focus on use of games, simulation, role-playing, etc. in intervention. (S)

**SOC 590 Practicum.** (5 Hours) The practicum experience will be obtained at one of the local agencies or at an agency in another city or state. The internship will include: supervised leadership assignments, administrative and supervisory functions in a public or private agency or institution with emphasis on services for alcoholics or other substance abusers. A bi-weekly integrative seminar during the practicum allows students to share their field experiences with each other. (D)

**CJS/SOC 591 Seminar in Police Administration** (3 Hours) The study of police practices and problems, functional and organizational dilemmas of law enforcement, role and interaction of police and community, examination of police subculture and public policy implications on police practices. Includes an analysis of police organization, management and operations, issues and problems of contemporary law enforcement. (S)

**SOC 592 Crime and Substance Abuse** (3 Hours) This course will examine concepts of crime and substance abuse in our society and issues and consequences. It will relate to the differential association, differential social organization theories, and their underlying assumptions and propositions. Criminal substance abuse behavior causation as well as other factors will be discussed during course and crime and substance abuse. Attention will also focus on typologies of criminal substance abuse and the criminal justice system. (D)

**SOC 597 Directed Individual Project** (4 Hours) Students work under an advisor on research project. Attention is given to the development of analytical writing and communication skills in scholarly research paper. Defense of paper is required. (D)

**SOC 598 Internship** (3 Hours) Students will obtain practical experience at one of the local or state correctional institutions. The internship will include supervised leadership assignments, administrative and supervisory functions in these settings with emphasis on acquisition of knowledge and service experience for juveniles and criminals. A weekly seminar during the internship will allow the students to share their field experiences with each other. (D)

**SOC 599 Special Topics** (3 Hours) Varying advanced sociological topics selected by the instructor for study in depth. Course may be repeated for credit for a maximum of nine semester hours provided registrations cover different topics. Topics announced in advance. (D)

**SOC 600 Master's Thesis.** (6 Hours) The candidate for the Master of Arts degree must present a thesis based on research conducted on a topic that is approved by his/her advisor. (D)

**SOC 602. Departmental Comprehensive Exam** (1 Hour). This course is for students who have completed all coursework and need to be enrolled in order to take the comprehensive examination.

**\*CJ/SOC 620 Community Analysis.** (3 Hours) Various approaches to community; types of community; the structural and functional aspects such as leadership, social stratification, subgroups, values and norms. (F)

**\*CJ/SOC 622 Research and Statistics.** (3 Hours) Descriptive and inferential statistics will be reviewed and used to explore contemporary sociological issues. Methods of collection, maintaining, analyzing and reporting data will be addressed. (S)

**CJ/SOC 635 Crime in the Urban Community.** (3 Hours) This course will cover a wide array of topics on crime in the urban community. Most importantly, this course will seek to find solutions to "why" the crime rate is steadily rising in the urban community and what measures are taken to curb the crime rise. (S)

\*Courses above the 600 level may be taken for the Master of Arts in Sociology or as electives in the Educational Specialist degrees.

## DEPARTMENT OF HISTORY AND PHILOSOPHY

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Dr. M. Azevedo, Professor and Dean

Dr. K. Barima, Assistant Professor

Dr. M. Bernhardt, Professor

Dr. J. Brockley, Associate Professor

Dr. R. Luckett, Associate Professor

Dr. S. Maneck, Associate Professor

Dr. L. Roopnarine, Professor

Our program offers courses in a wide range of fields. Along with the department's strengths in African American History, Latin American, Caribbean, Public History, the American South, and the African Diaspora, the department's faculty also teach classes on Women's History, Film, the Middle East, Latin America, Sexuality, Religion, Disability, and many other topics.

The department offers both a traditional program and a fully online program. Both include two tracks for students seeking a Master of Arts degree (36 total credit hours) and are designed to be completed in two years. There is also have a non-degree option for teacher certification. The project option is specifically for students seeking to improve their credentials. Students complete coursework and spend one semester writing a secondary-source-based research paper. The thesis option is recommended for students who wish to continue their graduate education. Students complete coursework and a master's thesis. This option requires a more intensive research focus under the guidance of an advisor with the goal of producing a master's thesis that will prepare the student for a doctoral degree program. The non-degree seeking program allows those desiring certification to teach History to complete up to 12 hours of coursework.

### Mission Statement

The Department of History and Philosophy offers students the opportunity to pursue a course of study that prepares them to enter a range of professional paths and careers. These potential careers include teaching from elementary to high school to junior college to the four year university. Additional professional forays are possible in research and scholarship enterprises, public and leadership service and a welter of other pursuits, all requiring a demonstrated knowledge, appreciation and application of the human historical experience in response to an ever-changing multi-cultural world.

The graduate History program's areas of concentration include Global, Social and Cultural, U.S., Public, and African Diaspora history. The department has an

especially impressive curriculum as well as an assembled coterie of talented teaching research faculty.

#### **Program Objectives**

1. To use classroom instruction and relevant professional experiences, thereby preparing majors to conduct historical research while honing the requisite knowledge, competencies and mastery essential for history graduate matriculation.
2. To prepare students to continue graduate study beyond the Master of Arts degree and/or engage in history related professional careers.
3. To prepare students to teach history in middle and secondary schools as well as at the junior college level.
4. To serve the academic needs of teachers, principals, and supervisors by providing opportunities to enhance and hone their skill set for performing current teaching and/or leadership responsibilities.
5. To promote the scholarly study and investigation of the human historical experience and the dissemination of such research via both presentations at professional conferences and publication in the discipline.

#### **Department Admission Requirements:**

1. Applicants must satisfy all admission requirements of the Division of Graduate Studies.
2. Applicants should have a GPA of 3.0 or higher for admittance to the History Department. Applicants with a GPA of less than 3.0 will be considered on a case-by-case basis.
3. Applicants must submit three (3) letters of recommendation to the History Department.
4. Applicants must submit a 1 ½ - 2 page Statement of Purpose to the History Department describing why they are seeking a graduate degree in history, their research and writing experience, and what they desire to study.
5. Applicants with a GPA of 3.0 or higher are encouraged to submit a writing sample (an academic paper written for an undergraduate course or publication) to the History Department to strengthen their application but are not required to do so. Applicants with a GPA of less than 3.0 are required to submit a writing sample.

#### **Transfer of Credits:**

Up to nine semester hours of credits in significantly related courses from other colleges and universities may be accepted toward the M.A. degree in History. The earned credits must be from a graduate history program at an accredited institution of higher learning.

#### **M.A. Degree Requirements:**

The M.A. degree in History is a 36-hour program with a thesis or project option. Students who desire to pursue additional education beyond the M.A. degree are strongly encouraged to choose the thesis option.

1. Required Courses: History 545 (Historical Criticism and Historiography) and either History 546 (Historical Research for the Thesis) or History 547 (Historical Research for the Project).
2. The thesis option requires 30 hours of course work, 6 hours of History 590 (Thesis Writing), and the completion of the thesis for graduation. The project option requires 33 hours of course work, 3 hours of History 591 (Project Writing), and the completion of a research project for graduation. 12 course hours must be taken in the department's four areas of study (3 course hours in each area of study). The areas of study are: Global History, African Diaspora, U.S. History, and Public History. Up to 6 course hours may be taken in other disciplines. All outside courses taken must be relevant to the student's historical studies or research. The department chair and the department's graduate advisor must approve of the outside courses and should be consulted before any such courses are taken.
3. A student who has demonstrated some academic deficiencies and is provisionally admitted to the graduate program may be asked to take an undergraduate course(s) or to enroll in a structured remedial program. In this way, the Department increases the likelihood of the student successfully completing the program and receiving the Master of Arts degree. These course hours are not included in the 36 hours required for the program.
4. The Graduate English Competency Exam (GECE) must be taken in the first semester of the program. If the student does not pass the exam, he or she must complete English 500 the following semester.
5. A written Graduate Area Comprehensive Examination (GACE) is required for completion of the M.A. degree in History. Students are eligible to take the exam after completing 18 hours of course work.
6. Thesis-option degree candidates must complete at least 6 hours of History 590. After completing 18 hours of coursework (which must include History 545 and 546) and submitting the Degree Plan and Committee Approval forms, thesis-option degree candidates may register for 3 hours of History 590. After completing 27 total hours, thesis-option degree candidates may register for an additional 3 hours of History 590. If the thesis is not completed after the initial six hours, the student must register for at least 1 hour of

History 590 each semester until all degree requirements have been satisfied.

- Project-option degree candidates must complete at least 3 hours of History 591. After completing 27 hours of coursework (which must include History 545) and submitting the Degree Plan and Committee Approval forms, project-option degree candidates will concurrently register for History 547 and 3 hours of History 591. If the research project is not completed after taking 36 total hours in the program, a student will need to register for at least 1 hour of History 591 each semester until all degree requirements have been satisfied.

**Thesis Option Course Plan:**

Course	Title	Semester Hours
HIST 545	Historical Criticism and Historiography	3
HIST 546	Historical Research for the Thesis	3
	Global History Area	3
	African Diaspora Area	3
	U.S. History Area	3
	Public History Area	3
	Elective Courses	12
HIST 590	Thesis Writing	6
<b>Total Hours</b>		<b>36</b>

**Project Option Course Plan:**

Course	Title	Semester Hours
HIST 545	Historical Criticism and Historiography	3
HIST 547	Historical Research for the Project	3
	Global History Area	3
	African Diaspora Area	3
	U.S. History Area	3
	Public History Area	3
	Elective Courses	15
HIST 591	Project Writing	3
<b>Total Hours</b>		<b>36</b>

**DESCRIPTION OF COURSES**

**HIST 500 Early Africa.** (3 Hours) A study of pre-colonial African History. The course emphasizes African Civilizations before the coming of Europeans.

**HIST 501 Colonial Africa.** (3 Hours) The study of the European scramble for Africa and the subsequent division of the continent's societies into colonies. The course explores as well the emergence of nationalism in Africa and the struggle for independence that it wrought.

**HIST 502 Contemporary Africa.** (3 Hours) A study of the emergence of Africa since 1945 with emphasis on the role of nations of the continent in both regional and world affairs.

**HIST 505 Introduction to Public and Applied Historical Studies.** (3 Hours) An introduction to selected subjects and skills related to the use of history in the public and private sectors.

**HIST 506 Introduction to Museology.** (3 Hours) A survey of the history of American museums and the principles of museum management.

**HIST 507 Archives and Records Management.** (3 Hours) A survey of the principles of archive and resource management with an emphasis on the study of material culture.

**HIST 509 Historical Archaeology.** (3 Hours) Introduction to archaeology with an emphasis on material culture.

**HIST 510 Discovery and Preservation of Local, State, and National History.** (3 Hours) Survey of techniques and methodologies for researching and writing the histories of various political and cultural subdivisions. The subdivisions that will serve as venues for the historical studies include and range from local municipalities, small towns and counties to the state, region and nation.

**HIST 513 Birth of the American Republic.** (3 Hours) The course chronicles the founding and development of the colonies that became the United States and analyzes the origins of the American Revolution and establishment of the American Republic.

**HIST 514 Antebellum America.** (3 Hours) A survey of America's Antebellum era. The course emphasizes the major historical developments of the period, which included social reform movements, the growing sectional divide, the expansion of slavery, the pursuit of manifest destiny, and the nation's drift toward Civil War.

**HIST 515 Civil War and Reconstruction.** (3 Hours) The course provides a broad and yet penetrating overview of many developments, social, economic, and political, that defined what was surely the most tumultuous era in American History.

**HIST 521 History of Women in America.** (3 Hours) An examination of the problems, challenges and experiences of American women from the colonial period to the 21st century.

**HIST 522 Early African-American History.** (3 Hours) An examination of African-descended people's historical participation in American life from the Atlantic slave trade through Reconstruction.

**HIST 523 Modern African-American History.** (3 Hours) An examination of African descended people's historical participation in modern American life since Reconstruction.

**HIST 524 Sexuality in the United States.** (3 Hours) Students will examine the changes in sexual morals, the regulation of sexual behavior, and the construction of sexual identities from the colonial period to the present.

**HIST 525 History of the Frontier.** (3 Hours) The concept of the Frontier is arguably one of the most contentious interpretations in U.S. History. Is the Frontier a process, a place, or perhaps both? As a source of endless debate, the Frontier will be examined along with the American West. The Frontier and the West each have a long complex history that is often difficult to separate from myth. It is a history that this course will explore from many different angles.

**HIST 526 Constitutional History of the United States.** (3 Hours) An analysis of the major developments in American constitutional history from



the founding of the nation to the present.

**HIST 527 Emergence of Modern America, 1875-1917.** (3 Hours) An analysis of American society emphasizing political, economic, and social changes between the end of Reconstruction and our entry into World War I.

**HIST 528 War, Depression, and Recovery, 1917-1941.** (3 hours) The period of the 1920s and 1930s was an age of extremes in U.S. History. Situated between two World Wars, the United States experienced an era of economic growth and prosperity followed by the worst depression in the nation's history. These extremes dramatically shaped the social, cultural, and political events of these decades.

**HIST 529 Contemporary United States, 1941 to the Present.** (3 hours) The Postwar Era in the United States has been marked by social upheaval. Marginalized people, including African Americans, Mexican Americans, Native Americans, women, and homosexuals, fought for their civil rights. The Cold War pushed the world to the brink of annihilation. Vietnam divided the nation. The Counterculture challenged the status quo. The contrast between the Rust Belt and the Sun Belt signified economic, demographic, and political changes. Liberals launched a political revolution and Conservatives a counterrevolution in response. This course will address these social, cultural, and political developments, and others, that have taken place over the last 75 years.

**HIST 530 History of the South.** (3 Hours) An examination of the social, political, and economic development of the American South from Jamestown to the present with a particular focus on the history of race relations.

**HIST 531 History of the Caribbean.** (3 Hours) A study of Caribbean historical development from the 15th century to the modern period. Socio-cultural, economic and political developments in the region will be emphasized.

**HIST 532 Seminar in Latin American History.** (3 Hours) A readings and research centered course focusing on the historical development of Latin America in the Western Hemisphere. Primary emphasis will be given to the impact of Spanish culture in the region, patterns of political, economic, social and intellectual ferment as well as historic and enduring problems specific to Latin America.

**HIST 533 Advanced Research in Mississippi History.** (3 Hours) A research intensive course devoted to the study of special topics in Mississippi history.

**HIST 541 Europe from Napoleon to Bismarck 1815-1871.** (3 Hours) A period course that explores the major historical developments in Europe between the defeat of Napoleon and the emergence of Otto von Bismarck.

**HIST 543 Seminar in European Imperialism.** (3 Hours) A course offering reading and research intensive study of 19th and 20th century European imperialism, beginning with the scramble for Africa.

**HIST 544 World War II.** (3 Hours) An examination of World War II from its origins in a policy of appeasement to wartime events and the dropping of the atomic bomb.

**HIST 545 Historical Criticism and Historiography.** (3 Hours) A course devoted to the studies of theories of historical criticism and their application in the analysis and writing of history. Selected works of historical scholarship are used for analysis, illustration and comparison. (Required)

**HIST 546 Historical Research for the Thesis.** (3 Hours) A course designed to assist students completing a thesis in honing both their research and writing competencies.

**HIST 547 Historical Research for the Project.** (3 Hours) A course designed to assist students completing a project in honing both their research and writing competencies.

**HIST 550 Oral History.** (3 Hours) Designed to expose students to the techniques, methodologies and preparation of advanced projects in oral history.

**HIST 551 Special Topics in World History.** (3 Hours) Designed to provide coverage of specialized topics in Latin American, Caribbean, Middle East, European, African, or Asian history.

**HIST 552 Problems in American History.** (3 Hours) Designed to allow students to perform creative research in strategic areas and on topics such as women, reform movements, history of ideas, urban and regional planning, African-American experience, and American economic history.

**HIST 553 Quantitative Methods in History.** (3 Hours) The application of statistics and computer techniques to historical research and writing.

**HIST 554 Renaissance and Reformation Eras** (3 Hours) A survey of the political, economic, social, scientific, intellectual, and ecclesiastical developments in Europe during the fourteenth and fifteenth centuries, culminating with the Reformation and counter-Reformation movements of the sixteenth century.

**HIST 556 Contemporary Middle East.** (3 Hours) Surveys of the modern near east beginning with the dissolution of the Ottoman Empire, the rise of Zionism and Arab Nationalism, the pre-World War II Palestine conflict, the establishment of the State of Israel in 1948 and the subsequent Arab-Palestinian wars of the past half century.

**HIST 560 United States Media History.** (3 Hours) This course examines the history of media in the United States and its relationship to American society and culture. It will trace the role media has played in portraying historical events, developments in technology and the creation of new forms of media, the uses of media, and the connection between media and American culture.

**HIST 561 Film and History Seminar: Filmmakers' Responses to Political Debates and Policies in the United States, 1900-Present.** (3 Hours) Students will examine the ways in which films engaged with selected political debates and policies in the United States between 1900 and the present. Topics may include the World Wars, Cold War, and War on Terror, Great Depression, immigration, Prohibition, the Red Scares, and urban development.

**HIST 562 Film and History Seminar: Filmmakers' Responses to Social Change and Conflict in the**

**United States, 1900-Present.** (3 Hours) Students will examine the ways in which films reflected and engaged with selected social issues in the United States from the beginning of the twentieth century to the present. Topics may include African American, Mexican American, and Native American civil rights; the Feminist Movement; Gay and Lesbian civil rights; sexual revolutions of the 1920s and postwar era; and class conflict.

**HIST 563 Film and History Seminar: Film Makers' Interpretations of World War II.** (3 Hours) Students will examine the ways in which films from around the world reflected and engaged with selected political, social, and military issues of World War II during and since the war.

**HIST 590 Thesis Writing.** (3 Hours) The research and writing of a thesis under the direction of a faculty advisor.

**HIST 591 Project Writing.** (3 Hours) The research and writing of a project under the direction of a faculty advisor.

**HIST 592 History Internship.** (3 Hours) Provide History majors the opportunity to intern with a public or private agency or organization, which may result in job placement possibilities.

**HIST 652 Urban History.** (3 Hours) Focuses on the growth of urbanism and the impact of urbanization on American life and culture.

## **DEPARTMENT OF POLITICAL SCIENCE**

Dr. Leniece T. Smith, Associate Professor and Interim Chair

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### **Faculty**

Dr. L. D. Gray, Assistant Professor

Dr. B. D. Orey, Professor

Dr. E. C. Nwagboso, Professor

Dr. B. House-Soremekun, Professor

Dr. L. T. Smith, Associate Professor

The Department of Political Science offers a graduate program leading to the Master of Arts in Political Science. Students may choose the thesis or non-thesis options to complete the M.A. degree.

### **Mission Statement**

Students and faculty in the Master of Arts program in Political Science, work in partnership to observe, critique, debate and analyze the appropriate and effective use of power by governmental institutions and actors, in a democratic society and the larger global community. The graduate program serves the public interest by developing and preparing leaders for employment and

service in the institutions of public life. The program also prepares students for doctoral and advanced professional study, which contributes to the development of the discipline of political science. Our urban location in the capital city of Jackson provides a rich and varied laboratory for both empirical and applied research, as well as opportunity to observe and participate in politics.

### **Program Goals**

Students enrolled in the department shall:

- Develop a substantive body of knowledge about the history and evolution of the discipline, including its various approaches and methodologies.
- Acquire the capacity to gather and analyze primary and secondary data on politics in domestic and international contexts, and to critique extant studies as a way to develop original research.
- Engage in independent original research or with colleagues or faculty and practice these skills through internships and service learning opportunities.

### **Admission Requirements**

Prospective students must satisfy the requirements for admission to the Division of Graduate Studies. The Department of Political Science requests the submission of a statement of purpose and at least two letters of recommendation, and a minimum GPA of 2.8 (conditional enrollment).

### **Requirement for Degree Candidacy**

The comprehensive examination and completion of the core political science courses are required for a student to be admitted to candidacy for the M.A. in Political Science. The comprehensive examination consists of written essay questions seeking integration across the subfields of political science. It should be taken and passed by the end of the second year.

### **Retention Requirement**

A minimum grade point average of 3.00 (on a 4.00 scale) on graduate work earned in the degree program is required.

### **Degree Requirements**

The Department offers two routes for earning the M.A. in Political Science: thesis and non-thesis. The thesis route is intended for students who plan to pursue a doctorate or other post-graduate study. The thesis route requires a minimum of thirty semester hours of coursework and six credits of thesis culminating in the writing and defense of a thesis. The non-thesis route requires the completion of a minimum of thirty-six semester hours of coursework and the submission of a significant research paper.

All students must successfully complete the following and maintain an overall 3.00 GPA (on a 4.00 scale) in order to earn the M.A. degree in Political Science.

Track	Core Coursework*	
Non-Thesis (36 hours + Significant research paper)	PS 515 Modern Political Theory PS 507 Political Inquiry & Research PS 509 African Political Systems PS 542 Politics of Developing States Elective Elective *All courses are 3 credit hours	PS 512 Black Political Thought PS 506 Methods & Approach to Political Science PS 532 Blacks in the American Political System PS 565 International Relations Elective Elective
Thesis (30 hours + 6 Thesis hours)	PS 515 Modern Political Theory PS 507 Political Inquiry & Research PS 509 African Political Systems PS 542 Politics of Developing States PS 598 Thesis Elective *All Courses are 3 credit hours	PS 512 Black Political Thought PS 506 Methods & Approach to Political Science PS 532 Blacks in the American Political System PS 565 International Relations PS 598 Thesis Elective

1. Complete 18 hours of required courses, (see below)
2. Take and pass the Graduate English Competency Examination.
3. Take and pass the Graduate Area Comprehensive Examination.

Students pursuing the thesis option must also complete the following requirements.

1. Complete at least six (6) hours of electives in consultation with the major advisor.
2. Write and have an oral defense of masters' thesis.

Students pursuing the non-thesis option must also complete the following requirements.

1. Complete at least twelve (12) hours of electives in consultation with the major advisor.
2. Write and submit a significant research paper.

## DESCRIPTION OF COURSES

**PS 506 Methods and Approaches to Political Science.** (3 Hours) A review of traditional, behavioral and post behavioral approaches to political science, methods of research and explanation. A required course.

**PS 507 Political Inquiry and Research.** (3 Hours) An inquiry into concepts and methods of social science in general and of political science in particular; the philosophy of science; presuppositions, aims and history of procedures and methods, research techniques, sources, bibliography and the presentation and publication of investigative results. A required course.

**PS 508 Politics of African Independence Movements.** (3 Hours) Examination of the motivations, methods, philosophies and politics of the African independence movements including the influences of Pan-Africanism, the role of political parties, the challenges of nation-building, and the impact of external actors (i.e. colonial powers, United Nations, Organization of African Union, US).

**PS 509 African Political Systems.** (3 Hours) This course includes traditional African political systems and their developments; the impact of colonialism on the systems, African nationalism, and the politics of independent Africa.

**PS 512 Black Political Thought.** (3 Hours) A study of Black political theory that has developed since the end of the civil rights period with an evaluation of new concepts in Black political theory and the links between these concepts and the historical problems considered in Afro-American political theory.

**PS 515 Modern Political Philosophy** (3 Hours) A history of political philosophy in which attention is given to the dilemma of democracy with emphasis on liberty and equality, liberalism, Marxism, colonialism, feminism, nationalism, and post-modernism. The impact historical events will be explored. Attention will be given to the works of Tocqueville, Wollstonecraft, Mill, Hegel, Marx, Nietzsche, Fanon, Martin Luther King, and Rawls.

**PS 532 Blacks and the American Political System.** (3 Hours) An assessment of the position of Blacks in the political system of the United States, both historical and contemporary, with special attention to alternative political strategies for the present political epoch. Special emphasis will be placed on urban political systems. A required course.

**PS 539 Urban Political Structures.** (3 Hours) This course examines the rise of Black politics in urban areas, relations between whites and Blacks in the urban city, as well as the concept of community, and particularly, the changing political process.

**PS 542 Politics of the Developing States.** (3 Hours) An examination of the political processes in the developing countries and a study of the general problems arising in the transition from traditional societies to modern industrial states in an effort to describe the typical patterns of political change.

**PS 565 International Relations.** (3 Hours) The nation-state system and conceptions of the national interest in

modern world politics, forms and distribution of power and the adjustment of international conflict.

**PS 581 Metropolitan Areas and Community Power Analysis.** (3 Hours) An examination of the national and urban power structures in the United States, community power structures, studies, models of urban political process. Elitism and pluralism and the implications for the Black community, the politics of metropolitan reorganization and its impact on Black politics, the metropolitan areas in the American federal system, and suburban-central city conflicts.

**PS 596 Independent Study.** (1-6 Hours) The student is allowed to select research, which will be beneficial to his/her program. The topic must be approved by the adviser and the instructor selected by the student for the research.

**PS 597 Internship** (3 Hours) Prerequisite: Core Courses. Individual work experience in government agencies.

**PS 598 Thesis** (3 Hours) The candidate for the Master of Arts degree presents a Thesis embodying the results of his research. The candidate chooses his problem but approval by his adviser is required.

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## DEPARTMENT OF PSYCHOLOGY

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Dr. Pamela Banks, Professor and Chair

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### Faculty

Dr. P. Banks, Professor

Dr. D. McLin, Professor

Dr. K. Hudson, Assistant Professor

Dr. C. Moreland, Assistant Professor

Dr. D. Pate, Associate Professor

Dr. K. Sly, Associate Professor

Dr. J. Reese-Smith, Assistant Professor

Dr. B. Williams, Director

Dr. T. Kearns-Cooper, Visiting Assistant Professor

Dr. J. Schweitzer, Visiting Assistant Professor

### Program Objectives and Mission

The Department of Psychology offers a Ph.D. degree in Clinical Psychology. The mission of the doctoral program is:

1. To produce graduates who are skilled in the science, theory and practice of psychology.
2. To increase student awareness, knowledge, and skills in multicultural psychology.
3. To produce graduates who have the requisite knowledge and skills to conduct their work in accordance with ethical, legal, and professional standards in their practice and research.
4. To produce students who will engage in clinical and research experience involving the diverse psychological, health, and service needs of ethnic minority populations.

Departmental faculty, supervisors, and administrators have a professional, ethical, and potentially legal obligation to ensure that graduates from this program are competent to engage in effective, and appropriate service, research and practice in the profession of psychology. This requires the Program Faculty, training staff, supervisors, and administrators only to admit and graduate doctoral candidates that possess the appropriate professional, ethical, interpersonal, and psychological qualities without demonstrable problems (e.g., cognitive, emotional, psychological, interpersonal, technical, and ethical) that do not interfere with professional competence while working with other programs, employers, or the public-at-large.

Students in this program will be guided by a curriculum anchored in the cumulative body of psychological knowledge, and grounded in statistics, research design, and experimental methodology. The curriculum is designed to develop students' knowledge and skills required to effectively function as an empirically oriented clinical psychologist in diverse settings. This is

accomplished through a sequence of formal clinical courses, distinguished by in-depth exploration of multicultural issues and exposure to ethnic minority communities, including interdisciplinary and inter-organizational collaboration and consultation.

The process utilized to accomplish this mission is consistent with the goals and mission of Jackson State University as a comprehensive university. This program is comprised of students and faculty committed to addressing multicultural issues, conducting objective assessments/evaluations, and utilizing systematic individual and community-level interventions. The psychology department strives to support students and faculty involved in basic and applied research through the use of a challenging intellectual environment.

### Accreditation

The program is accredited by the American Psychological Association. Additional inquiries about our accreditation status can be addressed to the APA Office of Program Consultation and Accreditation: (202) 336-5979.

### Admission Requirements

A major goal of this program is retention and graduation of admitted applicants who have the educational foundation, motivation, and personality characteristics required to successfully complete an academically intensive and rigorous doctoral program. Applicants who have passed the initial screening are required to participate in an in-person interview conducted by the members of the Graduate Faculty. Admission into the program is a very competitive process. A limited number of slots (6 to 7) are available each academic year. Please note that meeting minimal application standards does not guarantee admission.

The minimum requirement for admission is a Bachelor's degree from a regionally accredited institution with at least 24 semester hours of psychology coursework in the following psychology subject domains: abnormal, developmental, experimental or research methods, learning or cognition, biological or physiological, personality, social, and statistics.

The following application materials are required:

1. Official transcripts of all post-secondary academic work sent from institutions directly to the JSU Graduate School.
2. An official copy of the GRE test scores sent from ETS directly to the Graduate Faculty. The program does not use specific GRE cut-off scores in the admission process; however, submission of GRE scores prior to the application deadline is required. The GRE subject test in Psychology is not required.
3. A signed "Informed Consent to Participate in the Admissions Screening, Evaluation and Interview Process" form and the "Clinical Psychology Doctoral Program Application."
4. A curriculum vitae/resume.

5. Three letters of recommendation from individuals qualified to assess the applicant's academic and professional potential. A minimum of two (2) letters must be written by faculty members or faculty mentors familiar with the applicant's academic performance; the third letter may be written by qualified mentors who have supervised previous clinical or research work. Please send no more than four letters. All letters must be typed and accompanied with the JSU Recommendation Form.
6. An acceptable score of the Test of English as a Foreign Language (TOEFL) must be submitted, if applicable.

The following application materials and other related information are available for download at [www.jsu.edu/psychology/graduate](http://www.jsu.edu/psychology/graduate):

- a) Program Goals and Objectives
- b) Program's Mission Statement
- c) Doctoral Program Information
- d) Degree Requirements, Curriculum and Course Description
- e) Graduate Program Application
- f) Program Assistantship Application
- g) Program Evaluation and Recommendation Form
- h) Clinical Psychology Doctoral Students
- i) Student Admissions, Outcomes and other Data

The Admissions Committee utilizes application materials to evaluate the prospective doctoral candidates in the following domains:

1. Academic aptitude for doctoral-level studies;
2. Understanding and appreciation of diversity issues;
3. Understanding and appreciation of the program's requirements;
4. Previous professional or training experience in a clinical setting;
5. Previous research experience and dissemination history;
6. Psychological suitability to perform as a clinical psychologist;
7. Verbal communication skills;
8. Interpersonal skills;
9. Professional demeanor;
10. Ethical considerations based on the Ethical Principles of Psychologist and Code of Conduct (APA, 2016)

Currently, criminal background checks are not required as part of the applicant evaluation process. However, all applicants must be aware that the various agencies that provide practicum, externship, and pre-doctoral internship training opportunities usually require a criminal background check prior to placement. These agencies are external to the University and may set or revise placement

policies at any time; a background check that reveals professional misconduct or a criminal conviction could result in a student's ineligibility for initial or continued enrollment in the program. This program cannot be completed without the successful completion of all coursework.

### Readmission to the Program

Inactive and/or former students of the program must consult with the Director of Clinical Training regarding current readmission policies.

### Transfer Credits

Students with previous graduate coursework in psychology can transfer a maximum of 15 credit hours if the coursework has been completed within eight years of the first date of enrollment into the program. Additionally, the transferred courses must have a letter grade of "B" or better. Any course transferred must be equivalent to 700 level courses at Jackson State University and should include coverage of pertinent multicultural issues commensurate with the program's focus and expectations.

Up to two courses can be transferred to satisfy specific course requirements listed under both the General Core and Research Core (totaling four). No more than one course can be transferred as satisfy specific course requirements listed under the Multicultural/Diversity Core. Any remaining courses (no more than 15 hours) can be transferred to satisfy elective course requirements. Any transfer courses to be considered as satisfying General Core, Research Core, or Multicultural Core requirements must have PSY or equivalent prefix. Equivalent coursework listed under the Clinical Core cannot be transferred.

### Degree Requirements

The Ph.D. program is a full-time, on campus program requiring a minimum of five years of post-baccalaureate study, including the completion of Dissertation Research and a one-year, full-time predoctoral internship. Some courses will only be offered during summer sessions. Students are expected to complete all requirements for the Ph.D. degree and graduate within eight years of the date of first enrollment. Currently, the Department does not offer a Master's degree.

The Ph.D. program requires 18 hours of General Core Courses, 16 hours of Research Core Courses, 21 hours of Clinical Core Courses, 9 hours of Multicultural/Diversity Core Courses, 20 hours of Practica and Externship Courses, 9 hours of Elective Courses, 9 hours of Dissertation Credit, and a one-year internship at an APA-accredited/APPIC-member pre-doctoral internship training program (total of 2 credit hours).

During the third year of study, the student must pass the Graduate Area Comprehensive Examination. The student must pass this examination to be admitted to candidacy for

the Ph.D. The student must also pass an oral clinical-competency examination and propose their dissertation proposal before applying for a pre-doctoral internship position.

For a detailed explanation of program requirements refer the *Clinical Psychology Program Handbook*.

## Curriculum Outline

Course	Title	Semester Hours
<b><u>I. General Core</u></b>		
PSY 710	Theories of Personality	3
PSY 711	Learning and Cognition	3
PSY 712	Advanced Developmental Psychology	3
PSY 713	Biological Psychology	3
PSY 714	Social and Cognitive Bases of Behavior	3
PSY 715	History and Systems	3
<b>Total Hours</b>		<b>18</b>
<b><u>II. Research Core</u></b>		
PSY 700-1	Research Seminar	1
PSY 700-2	APA Research Writing	
PSY 730	Research Methods	3
PSY 731	Advanced Statistics I	3
PSY 732	Advanced Statistics II	3
PSY 733	Multivariate Methods I	3
PSY 734	Psychometrics	3
<b>Total Hours</b>		<b>16</b>
<b><u>III. Clinical Core</u></b>		
PSY 740	Psychopathology	3
PSY 742	Cognitive Assessment	3
PSY 743	Personality Assessment	3
PSY 750	Ethics in Psychology	3
PSY 751	Psychotherapy	3
PSY 752	Behavior Therapy	3
PSY 753	Group Therapy	3
<b>Total Hours</b>		<b>21</b>
<b><u>IV. Multicultural/Diversity Core</u></b>		
PSY 720	Cross-Cultural Psychology	3
<i>The student must take 2 of the following courses:</i>		
PSY 721	Psychology of African-Americans	3 3
PSY 722	Psychology in the Urban Environment	3
PSY 723	Psychology of Gender	3
<b>Total Hours</b>		<b>9</b>
<b><u>V. Practicum and Externships</u></b>		
PSY 735	Research Practicum I	1
PSY 736	Research Practicum II	1
PSY 760	Clinical Practicum I	3
PSY 761	Clinical Practicum II	3
PSY 762	Clinical Practicum III	3
PSY 764	Externship I	3

PSY 765	Externship II	3
PSY 766	Externship III	3
	<b>Total Hours</b>	<b>20</b>

*The student must take 3 of the following courses:*

PSY 741	Psychopathology of Childhood and Adolescence	3
PSY 744	Neuropsychological Assessment	3
PSY 745	Forensic Psychology	3
PSY 755	Psychopharmacology	3
PSY 770	Advanced Seminar	3
PSY 771	Human Sexuality	3
PSY 772	Health Psychology	3
PSY 773	Theory and Treatment of Addictive Disorders	3
PSY 774	Group Processes	3
PSY 775	Marital and Family Therapy	3
PSY 777	Multivariate Methods II	3
	<b>Total Hours</b>	<b>9</b>

#### VII. Dissertation Research

PSY 790	<i>Dissertation Research</i>	var.
	<b>Total Hours</b>	<b>9</b>

#### VIII. Predoctoral Internship

PSY 799	<i>Internship</i>	var.
	<b>Total Hours</b>	<b>2</b>

**Total Required Hours 104**

#### **DESCRIPTION OF COURSES**

**PSY 700-01 Research Seminar\*** (1 hr) Reviewed and discussion of ongoing departmental research project; literature review of research topics of interest. The seminar is intended to assist the student in developing research ideas for implementation.

**PSY 700-02 APA Research Writing** (1 hr) An exploration into the process of scientific writing that facilitates concision and effective communication; enabling the ability to disseminate scholarly material in the field of psychology and other behavioral sciences.

**PSY 710 Theories of Personality** (3 hrs) Consideration of the major theoretical orientations concerning personality and the evidential basis for each.

**PSY 711 Learning and Cognition** (3 hrs) Research and theory in human and animal learning, memory, and cognition.

**PSY 712 Advanced Developmental Psychology** (3 hrs) A study of the biological, social, and cultural factors affecting life-span human development. A cross-cultural perspective will be emphasized.

**PSY 713 Biological Psychology** (3 hrs) Physiologic3al bases of learning and motivation; nervous system structure, function, and disorder in relation to behavior.

**PSY 714 Social and Cognitive Bases of Behavior** (3 hrs) Theory and research on attitude formation and change, attributional styles, prejudice, interpersonal perception, group dynamics, self regulation, and cognitive styles.

**PSY 715 History and Systems** (3 hrs) Historical evolution of psychology from philosophical antecedents to the development of major systems and theories.

**PSY 720 Cross Cultural Psychology** (3 hrs) An examination of research and practice regarding assessment and treatment of culturally diverse populations with particular emphasis on the cultural context of etiology and course of psychological disorders. An opportunity to develop the student's level of awareness in accordance of his or her cultural world views through self assessment ensuring greater self-efficacy and competency within the area multiculturalism.

**PSY 721 Psychology of African-Americans** (3 hrs) A study of the psychological literature pertaining to the cultural, social, economic and political realities of African-Americans; a critical analysis of the development of Black Psychology and its contributions to clinical psychology. Its contributions to clinical psychology and how to utilize the theoretical construct with in a therapeutic environment.

**PSY 722 Psychology in the Urban Environment** (3 hrs) The study of the city as an environment, personal space and territoriality, crowding, noise, crime, drugs, and other urban hazards. Special problems faced by minorities in urban settings.

**PSY 723 Psychology of Gender** (3 hrs) Research and theory regarding gender differences and similarities.

**PSY 730 Research Methods** (3 hrs) An in depth study of research methodology with emphasis on experimental approaches. The course covers basic within and between group experimental designs, mixed designs, single subject experiments, non-experimental research (correlational methods, case studies, meta-analysis) and program evaluation. Research ethics are stressed. Further, students

are encouraged to begin developing a topic for their second year paper.

**PSY 731 Advanced Statistics I** (3 hrs) Elements of probability theory, discrete and continuous random variables and their distributions, principles of estimation, hypothesis testing, introduction to regression and analysis of variance, computer applications.

**PSY 732 Advanced Statistics II** (3 hrs) Advance topics in regression and analysis of variance, analysis of covariance, non-parametric procedures, and computer applications, Prerequisite: PSY 731

**PSY 733 Multivariate Methods I** (3 hrs) Multivariate analysis of variance and covariance, canonical correlation, factor analysis, discriminant analysis, selected advanced topics. Prerequisites: PSY 731, 732.

**PSY 734 Psychometrics** (3 hrs) Theories of measurement; evaluation of psychological assessment processes; test construction, validation, uses, problems and social implications. Prerequisites: PSY 731, 732, or equivalent.

**PSY 735 Research Practicum I\*** (var.) Supervised experience conducting a psychological research project. The student will review literature, conceptualize a research problem, formulate a research hypothesis and design a study to test it, execute the study, analyze the data, and write the second year paper. May be repeated.

**PSY 736 Research Practicum II\*** (var.) Continuation of PSY 735. May be repeated. Prerequisite: PSY 735.

**PSY 740 Psychopathology\*** (3 hrs) Etiology, epidemiology and dynamics of behavior and personality disorders: Theory, research, diagnosis and treatment. Introduction to DSM IV as a diagnostic tool.

**PSY 741 Psychopathology of Childhood and Adolescence\*** (3 hrs) Review of descriptive, experimental and clinical research on psychological disorders of children and adolescence with attention to the emotional, cognitive, and behavioral consequences cultural influences Prerequisite: PSY 740.

**PSY 742 Cognitive Assessment\*** (3 hrs) Administration and interpretation of major intelligence tests and other cognitive instruments. Training in test interpretation and report writing are emphasized.

**PSY 743 Personality Assessment\*** (3 hrs) Theoretical, conceptual and methodological aspects of objective and projective personality assessment; integration of results into the written psychological test report.

**PSY 744 Neuropsychological Assessment\*** (3 hrs) Administration and interpretation of selected neuropsychological tests and batteries. Prerequisites: PSY 714, 742, 743

**PSY 745 Forensic Psychology\*** (3 hrs) Competency to stand trial, criminal responsibility, expert witnesses, jury dynamics, and other applications of psychology within the legal system. Prerequisites: PSY 742, 743

**PSY 750 Ethics in Psychology** (3 hrs) Professional and ethical issues affecting the practice of psychology. Focus will be on the development of sound ethical and professional standards in psychology practice, teaching, supervision and consultation, and research.

**PSY 751 Psychotherapy\*** (3 hrs) Critical examination of principles, techniques, research, and theoretical models in psychotherapy and behavior change.

**PSY 752 Behavior Therapy\*** (3 hrs) Principles of behavior modification and their application in psychotherapy. Prerequisites: PSY 751.

**PSY 753 Group Therapy\*** (3 hrs) Therapeutic procedures for small clinical groups, dynamics of clinical groups. Prerequisites: PSY 751, 752.

**PSY 755 Psychopharmacology\*** (3 hrs) Physiological, psychological, and behavioral effects of psychoactive drugs with attention to those prescribed for psychiatric disorders. Role of the clinical psychologist in approaches combining medication and psychotherapy. Prerequisite: PSY 714.

**PSY 760 Clinical Practicum I** (3 hrs) Supervised training and in clinical interviewing, cognitive assessment, personality assessment, and psychotherapy. Allows students to “rehearse” the basic skills needed in providing psychological assessments including writing psychological reports using a scientific, mechanical format, clinical interviewing, mental status exams, micro skills training and fundamentals of Cognitive Behavioral Therapy Prerequisites: PSY 740, 742, 743, 750.

**PSY 761 Clinical Practicum II** (3 hrs) Supervised training and experience in cognitive assessment, personality assessment and psychotherapeutic procedures. Focus is on the development of intermediate to upper level intermediate skills in writing well integrated, comprehensive psychological reports, making diagnoses, and implementing treatment plans and empirically supported psychotherapeutic strategies and skills in case conceptualization and case analysis. Prerequisite: PSY 760.

**PSY 762 Clinical Practicum III\*** (3 hrs) Supervised training and experience in psychodiagnostics and psychotherapy. This course requires a minimum of ten clock hours per week. The student is expected to become competent in interviewing, assessment, therapy, and case conceptualization. Prerequisite: PSY 761.

**PSY 765 Externship I\*** (3 hrs) Supervised clinical experience in approved community, institutional, or hospital settings, Prerequisite: PSY 762.

**PSY 766 Externship II\*** (3 hrs) Continuation of PSY 765. Prerequisite: PSY 765.

**PSY 767 Externship III\*** (3 hrs) Continuation of PSY 766. Prerequisite: PSY 766.

**PSY 770 Advanced Seminar** (3 hrs) Selected topics. May be repeated.

**PSY 771 Human Sexuality\*** (3 hrs) Biological, psychological, social, and cultural bases of human sexuality. Diagnosis and treatment of sexual dysfunctions and disorders.

**PSY 772 Health Psychology** (3 hrs) Psychological, social and cultural factors related to physical health and illness; impact of life style on health; significance of cultural values in health promoting and health-damaging; clinical psychology in community health and medical settings.

**PSY 773 Theory and Treatment of Addictive Disorders\*** (3 hrs) Psychology of addiction: techniques and procedures for intervention and treatment.

**PSY 774 Group Processes** (3 hrs) Large and small group dynamics, theory and research concerning minority/majority group relations. Prerequisites: PSY 606



**PSY 775 Marital and Family Therapy\*** (3 hrs) A study of psychotherapeutic practice and theory applied in the treatment of families and couples.

**PSY 777 Multivariate Methods II** (3 hrs) Continuation of topics in Multivariate Methods I and selected advanced topics based on student needs and interests. Prerequisite: PSY 733.

**PSY 790 Dissertation Research\*** (9 hours, var.) May be repeated. Co-requisite: approved dissertation proposal.

**PSY 799 Internship\*** (2 hours, var.) Residency in an APA accredited mental health setting. Prerequisites: All coursework, comprehensive exam, clinical-competency exam, and dissertation proposal. May be repeated.

*\* Non-clinical psychology students are allowed to take any program courses, excluding courses in the following areas: Clinical Core, Practica, Externships, Dissertation Research, and Internship.*

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# SCHOOL OF PUBLIC HEALTH

## Dr. Mohammad Shahbazi Interim Dean

Jackson Medical Mall, Suite 301  
350 West Woodrow Wilson Drive  
Jackson, MS 39213  
Telephone: (601) 979-6387  
Fax: (601) 979-1422

### School of Public Health

- ◆ Department of Communicative Disorders
- ◆ Department of Behavioral and Environmental Health
- ◆ Department of Epidemiology and Biostatistics
- ◆ Department of Health Policy and Management/  
Healthcare Administration Program

### Vision

Leadership for optimal public health

### Mission

The mission of the Jackson State University School of Public Health is to prepare public health leaders and to improve the health of populations in the state of Mississippi, the nation and the world through evidence-based and community-oriented teaching, research and service.

### Goals

#### EDUCATION:

1: Produce competitive and highly skilled public health professionals, equipped with the knowledge and skills to solve complex public health problems through rigorous, outcomes-based academic programs that enhance critical and analytical thinking skills.

2: Sustain a nurturing educational environment that promotes academic excellence and effective public health practice through the recruitment and retention of qualified and diverse faculty and staff who demonstrate a commitment to academic excellence, research and practice, and progression and forward thinking in all public health disciplines.

#### RESEARCH:

1. Promote health equity and social justice and reduce health disparities of disadvantaged populations locally, statewide, nationally and globally through ethical and rigorous research that ensures the inclusion of community in the research, translation and dissemination process.

2. Enhance the research and practice skills of public health students through effective mentorship opportunities.

**SERVICE:** Transform public health issues through increased visibility within the community in the development of policy and advocating on behalf of disparate populations locally, statewide, nationally and globally.

## GRADUATE PROGRAM IN COMMUNICATIVE DISORDERS

Dr. Brandi Newkirk-Turner, Chair and Associate Professor  
350 West Woodrow Wilson Drive, Suite 2260  
Jackson, MS 39213  
Phone: (601) 979-1143  
E-mail: commdisordersgrad@jsums.edu

### Faculty

Dr. M. L. Burks, Assistant Professor  
Dr. M. Hall, Associate Professor  
Dr. Brandi Newkirk-Turner, Associate Professor  
Dr. C. Parker, Assistant Professor  
Dr. B. Sutton, Clinical Assistant Professor

The Department of Communicative Disorders offers a Master of Science (M.S.) degree program, and students enrolled in the master's program are trained to screen, assess, identify, diagnose, refer, and provide intervention, habilitation/rehabilitation to persons of all ages and cultural/ethnic backgrounds, with, or at risk for, disorders of articulation, fluency, voice, cognition, language, swallowing, hearing and other disabilities. Students learn to counsel and educate individuals with communicative disorders, their families, caregivers and other service providers to select, prescribe, dispense assistive, augmentative and alternative communication devices and other communication prostheses, and to provide services supporting the effective use of these devices.

### Accreditation

The master's education program in speech-language pathology at Jackson State University is accredited by the Council on Academic Accreditation in Audiology and Speech-Language Pathology of the American Speech-Language-Hearing Association (ASHA). Students who successfully complete the program meet the academic and clinical requirements for a license in Speech-Language Pathology granted by the Mississippi State Board of Health, for the Certificate of Clinical Competence in Speech-Language Pathology awarded by ASHA, and the Mississippi Educator Standard Class AA Vocational license.

### Mission

The mission of the graduate program in communicative disorders is to provide quality education to pre-professional and graduate students from diverse populations by offering educational experiences that require the application of knowledge of normal and abnormal communication, critical thinking, data analysis, the use of professional oral and written communication, and the infusion of technology, when possible, for the prevention, assessment and intervention of communication disorders. The program will guide graduate students to: (a) acquire the knowledge and

develop the skills, competencies and attitudes that are essential for the prevention, assessment and intervention of communicative disorders, and the safe, effective, and efficient practice of entry-level speech- language pathology, (b) develop the ability to analyze, synthesize, and evaluate data, and to conduct research, provide professional and public service to local, state, national, and world communities, (d) continue their professional growth by exploring developments in the profession and learning new models of prevention, assessment and intervention, and (e) develop an understanding and appreciation of ethnic and cultural diversity on normal and disordered communication.

### Program Objectives

The objectives of the Master of Science in Communicative Disorders Program are to:

- ◆ Educate students to independently, effectively and safely (a) differentiate between normal and abnormal communication, as well as normal and abnormal swallowing patterns; (b) diagnose and treat persons of all ages who have speech, voice, cognitive, language, communication and swallowing disorders; and, (c) habilitate/rehabilitate infants, children and adults with hearing loss.
- ◆ Equip students to ask relevant questions and provide appropriate information to patients, their families, care givers and other service providers regarding the prevention, diagnosis and management of disorders of human communication and swallowing.
- ◆ Facilitate clinical experiences that will train students to provide clinical services in a variety of settings including community clinics, hospitals, private practices, and university settings.
- ◆ Prepare students to meet the academic and clinical requirements for licensure granted by the Mississippi State Department of Health and the Certificate of Clinical Competence in Speech-Language Pathology awarded by ASHA.
- ◆ Guide students to evaluate developments in the professions, and conduct research in (a) the normal processes of language, speech, hearing and swallowing and (b) the prevention, diagnosis and treatment of disorders of human communication and swallowing.
- ◆ Assist students to develop sensitivity to and an appreciation of diversity in society, so that they (a) take into consideration individual differences in the provision of clinical services; (b) do not discriminate in the delivery of services on the basis of race or ethnicity, age, gender, religion, national origin, sexual orientation or disability; and, (c) work effectively with other professionals who may be different from them in respect to race or ethnicity, age, gender, religion, national origin, sexual orientation or disability.
- ◆ Encourage students to develop high standards of integrity, responsibility and ethics, so that they (a) hold paramount the welfare of patients they serve; (b) provide services only in areas in which they are competent; and (c) adhere to the fundamentals of ethical conduct.
- ◆ Prepare students for advanced programs of study in communicative disorders.
- ◆ Advocate the pursuit of continued professional growth through continuing education.
- ◆ Offer educational programs that will (a) promote the maintenance of current knowledge and skills of speech-language pathologists in the Jackson area, state,

national and world communities and (b) provide the general public with information regarding the prevention, nature, diagnosis and treatment of communication and swallowing disorders.

- ◆ Provide professional and public services to local, state, national and world communities.

### Admission Requirements

Admission is competitive. Applicants must meet the following requirements for regular admission:

- ◆ A baccalaureate degree in speech-language pathology from a regionally accredited college or university. Students may be admitted with baccalaureate, master's or specialist degrees in professions other than speech-language pathology but first must complete specified prerequisite courses with a grade of "B" (on 4-point scale) or better.
- ◆ A cumulative grade point average (GPA) of 3.0 (on 4-point scale) for courses completed during the junior and senior years, and a cumulative GPA of 3.0 (4-point scale) at the undergraduate level.
- ◆ A satisfactory Graduate Record Examination (GRE) score.
- ◆ A personal typewritten statement/essay that includes the applicant's (a) reasons for pursuing a degree speech-language pathology; (b) reasons for pursuing graduate study specifically at Jackson State University; (c) professional goals; (d) strengths that will contribute to success in the graduate program at Jackson State University; (e) limitations, if any, that may need to be addressed in order to successfully pursue graduate studies in speech-language pathology; and (f) past work, research or volunteer experiences, if any, that have helped to prepare the applicant for graduate studies.
- ◆ Typewritten responses to the following questions: (a) What is critical thinking and analysis? In your response, include examples from you experiences (education, professional and personal); (b) Writing skills are important for educational and professional development, and are essential for success in the graduate program. Explain how you plan to equip yourself to maintain a scholarly level of writing throughout the graduate program; and (c) What is the role of the student in graduate school? What is the role of the faculty member?
- ◆ Three letters of recommendation from speech-language pathology instructors and/or clinical supervisors. (Students with degrees in professions other than speech- language pathology may obtain these letters from instructors in their major area of study.)
- ◆ A satisfactory score on the Test of English as a Foreign Language (TOEFL) or IELTS from international applicants and those for whom English is a second language.

[Conditional admission may be given to a student who has earned a cumulative GPA of at least 2.50 – 2.99 (on a 4-point scale) for courses completed during the junior and senior years. However, admission is competitive. Therefore, conditional admission is rare. The student must earn regular status with a GPA of 3.0 in the first semester of full-time enrollment or the first 12 hours of graduate work.]

### Prerequisites

Applicants with baccalaureate, master's or specialist degrees

in professions other than speech-language pathology must complete courses in the areas listed below with a grade of “B” or better, prior to or concurrent application for the graduate program:

Courses	Semester Hours
*Anatomy and Physiology of Speech Mechanism	3
*Speech and Hearing Science	3
*Phonetics	3
*Normal Language Development	3
*Introduction to Audiology	3
*Articulation Disorders	3
*Language Disorders in Children	3

Additionally, applicants must have successfully completed:

- One course in biological science, and one course in physical sciences, and one course in statistics.
- Courses in behavioral and/or social sciences for a total of 6 semester hours.

Prerequisite courses in the professional area that were taken more than 10 years before the initiation of the graduate program may not be accepted.

#### Transfer of Credits

Students may be allowed to transfer a limited number of credit hours, provided that the criteria specified by the Graduate School and the Program are met. A maximum of nine (9) graduate semester hours of course credit earned with a grade of “B” (on 4.0 scale) or better in approved speech-language pathology or audiology courses may be transferred, given that the course content is commensurate with the requirements of this program and the credit hours were earned within the immediate past five years from a program accredited by the Council on Academic Accreditation in Audiology and Speech-Language Pathology. The applicant must apply for transfer of credit with 30 days of notification of acceptance into the program and prior to enrollment. A maximum of 25 clinical observation hours and 50 undergraduate clinical clock hours obtained in another graduate program may be allowed if the national certification and state licensure criteria for clinical supervision were met. A student who wants to transfer clinical clock hours from another program must have:

- that program’s director to verify the number of clock hours in each clinical category.
- the amount of supervision that was provided.
- the names and ASHA membership numbers of the clinical supervisor(s) before or at the time the student enrolls in the graduate program at Jackson State University.
- written approval of the transfer of academic (course) credit and clinical clock hours by the Graduate Communicative Disorders Program.

#### Degree Requirements

A student pursuing the Master of Science degree in Communicative Disorders is required to:

- Complete at least 52 semester hours (including no more than 6 semester hours of clinical practicum) with a cumulative average of “B” (on a 4.0 scale) or better. In addition to the core curriculum (46 semester hours), the student must successfully complete a thesis, or a project, or additional coursework.
  - Thesis Option.** The student must enroll in CMD 590: Thesis, for a total of 6 semester hours, successfully complete a thesis, and the Final Oral Examination.

- Project Option.** The student must enroll in CMD 589: Master’s Project, for 6 semester hours, and successfully complete a project.
  - Additional Coursework Option.** The student must successfully complete an additional 6 semester hours of electives within the Program, selected with the approval of the academic advisor.
- Acquire the knowledge and skills required for the Certificate of Clinical Competence in Speech-Language Pathology (CCC-SLP) by ASHA. Additionally, the student must successfully complete all clinical clock hours required at the time of graduation by:
    - the Communicative Disorders Program,
    - the Mississippi State Board of Health for licensure, and
    - ASHA for the CCC-SLP.
  - Successfully complete the Graduate English Competency (and ENG 500, if required) and written Comprehensive Examinations. Students who choose the thesis option must successfully complete a Final Oral Examination.

#### Plan of Study for the Master of Science in Communicative Disorders

##### Year 1: Fall Semester

CMD 510	Advanced Articulation and Phonological Disorders	3
CMD 527	Seminar in Child Language Disorders I	3
CMD 532	Methods of Research	3
CMD 537	Neuroanatomy and Neurophysiology	3
CMD 540	Advanced Clinical Practice in SLP	1
		13

##### Spring Semester

CMD 528	Seminar in Child Language Disorders II	2
CMD 530	Seminar in Acquired Disorders of Language I	3
CMD 541	Advanced Clinical Practice in SLP	1
CMD 565	Seminar in Fluency Disorders	2
CMD 575	Seminar in Organic Speech Disorders	3
		11

##### Summer Semester

CMD 525	Dysphagia	3
CMD 531	Seminar in Acquired Disorders of Language II	3
CMD 542	Advanced Clinical Practice in SLP	1
PHS 500	Introduction to Public Health Disciplines	3
		10

##### Year 2: Fall Semester

CMD 535	Augmentative and Alternative Communication	3
CMD 543	Advanced Clinical Practice in SLP	1
CMD 570	Seminar in Aural Rehabilitation	3
CMD 578	Seminar in Voice Disorders	3
		10

##### Spring Semester

CMD 544-545	Advanced Clinical Practice in SLP	2
	Elective/Thesis/Project	6
		8

**Total Hours** **52**

##### Academic Requirements

CMD 510	Advanced Articulation and Phonological Disorders	3
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CMD 525	Dysphagia	3
CMD 527	Seminar in Child Language Disorders I	3
CMD 528	Seminar in Child Language Disorders II	2
CMD 530	Seminar in Acquired Disorders of Language I	3
CMD 531	Seminar in Acquired Disorders of Language II	3
CMD 532	Methods of Research	3
CMD 535	Augmentative and Alternative Communication	3
CMD 537	Neuroanatomy and Neurophysiology	3
CMD 565	Seminar in Fluency Disorders	2
CMD 570	Seminar in Aural Rehabilitation	3
CMD 575	Seminar in Organic Speech Disorders	3
CMD 578	Seminar in Voice Disorders	3
CMD 540-549	Advanced Clinical Practice in Speech-Language Pathology	6
<b>Electives</b>		
CMD 515	Counseling in Speech-Language Pathology	1
CMD 519	Audiology for the Speech-Language Pathologist	3
CMD 523	Assessment and Evaluation in Speech-Language Pathology	3
CMD 550	Professional Issues in Speech-Language Pathology	1
CMD 555	Speech-Language Pathology in the Medical Setting	2
CMD 558	Seminar in Multicultural Issues	2
CMD 563	Research & Clinical Instrumentation	2
CMD 572	Communication Behaviors and the Aging Process	2
CMD 580	Business and Management Aspects of a Speech-Language Pathology Practice	2
CMD 582	Special Problems in Speech-Language Pathology	2-4
CMD 585	Independent Study	3-6
CMD 589	Master's Project	3-6
CMD 590	Master's Thesis	3-6
PHS 500	Introduction to Public Health Disciplines	3

**NOTE:** During each semester in which clinical clock hours are earned, the student must enroll in Advanced Clinical Practice in Speech- Language Pathology (CMD 540-549). However, no more than 6 semester hours may be counted towards the required 52 semester hours.

#### Clinical Practicum Requirements

The student must successfully complete all clinical clock hours required at the time of graduation by (a) the Communicative Disorders Program, (b) Mississippi State Board of Health for licensure, and (c) ASHA for the Certificate of Clinical Competence in Speech-Language Pathology. Additionally, the student must acquire all required clinical skills specified in the new certification standards before the student will be cleared for graduation. The Program operates the Central Mississippi Speech, Language and Hearing Clinic. The student must complete the clinical clock hours at this Clinic and at other off-campus clinical sites assigned by the Program.

The current cumulative clinical practicum requirements are specified below:

- ◆ At least 25-clock hours of clinical observation must be completed before beginning the clinical practicum.

- ◆ In addition to the observation, a minimum of 375 clock hours of supervised clinical practicum must be successfully completed, of which 325 clock hours must be earned in the graduate program.

#### DESCRIPTION OF COURSES

**CMD 510 Advanced Articulation and Phonological Disorders:** (3 Hours) Prerequisites: Course in phonetics. Students will develop the skills to effectively assess, plan, and implement appropriate intervention strategies for persons presenting with articulation and/or phonological disorders (including with functional or organic etiology) as well as regional or cultural dialectal variations of speech sound production.

**CMD 515 Counseling in Speech-Language Pathology:** (1 Hour) Prerequisites: Permission of instructor and academic advisor. This course will explore the social, emotional, cultural and vocational effects a communication disorder may have on individuals, their families and significant others. Students will learn appropriate techniques and strategies for counseling children, adolescents and adults presenting with conditions impacting communication. Students will also learn how to counsel and interact with families (immediate and extended), case managers and other service providers.

**CMD 519 Audiology for the Speech-Language Pathologist:** (3 Hours) Prerequisite Course in speech/hearing science or permission of instructor. Students will learn the etiology, signs, symptoms, and differential audiological findings in infants, children and adults with a variety of auditory disorders. The theory, methodology and procedures in differential diagnosis and test interpretation, including the appropriate modification of test procedures to accommodate the patient's chronological age, intellectual age, cultural differences, physical and emotional states will be examined. The assessment and management of persons with central auditory processing disorders will be explored.

**CMD 523 Assessment and Evaluation in Speech-Language Pathology:** (3 Hours) Prerequisites: Courses in normal language development, articulation disorders, and language disorders or permission of instructor and academic advisor. Students will learn to select, critique, administer, score and interpret standardized tests while also learning compensatory strategies to help reduce the impact of cultural bias. Procedures for informal and naturalistic assessment will be reviewed. The integration of informal and formal data to develop appropriate recommendations will be emphasized.

**CMD 525 Dysphagia:** (3 Hours) Prerequisite: Course in anatomy and physiology of the speech mechanism. Students will learn the normal anatomy and physiology of swallowing in infants, children and adults. The etiology, signs and symptoms of dysphagia, as well as screening, instrumental assessment and non-instrumental evaluation procedures will be explored. Management, including counseling and sensitivity to cultural differences, models of service delivery, indications and methods of oral and non-oral feeding, nutritional issues, and prevention of complications will be investigated. The student will learn to assess the effectiveness of treatment by using relevant outcomes.

**CMD 527 Seminar in Child Language Disorders I:** (3 Hours) Prerequisite: Course in normal language development. This course will address normal communication development in children from birth to age three. Students will develop an understanding of the major etiologies of language disorders in infants and toddlers

across cultures. Assessment and strategies, including the infusion of technology, for those presenting with disorders as well as for the at-risk child will be discussed. Skills to informally and formally determine the present communicative level of an infant or toddler using non-standard methods, such as play-based assessment will be addressed. Strategies for helping families from diverse backgrounds participate in the successful implementation of speech and language services to infants and toddlers will be shared. Policies impacting service delivery to this population and their families will be explored.

**CMD 528 Seminar in Child Language Disorders II:** (2 Hours) Prerequisites: Course in normal language development. Students will develop an understanding of the etiologies of language delay and disorders in children, and the impact of language impairment on the learning process. Formal and informal assessment and intervention strategies as well as treatment outcomes will be discussed. Students will develop awareness of issues pertinent to service delivery including cultural diversity, preparation of individualized educational programs, literacy, assessment of progress, behavior management, collaboration and infusion of technology. Various group processes and structures required for successful service delivery will be recognized. Legislation and policies impacting services to school aged children will be explored.

**CMD 530 Seminar in Acquired Disorders of Language I:** (3 Hours) Prerequisites: CMD 537 or equivalent. This course will explore the incidence, ethno-cultural differences and etiology of impairments that jeopardize acquired language as a result of insult to the central nervous system. The characteristics of different types of aphasias, as well as the effects of right hemisphere damage, including neglect, attention, linguistic, communicative, cognitive and affective deficits will be explored. Students will acquire knowledge of standardized and functional assessment of communication to ascertain the individual's abilities and impairments. Treatment approaches and strategies (including the infusion of technology) that promote compensation for deficits and promote recovery of function will be explored. Issues including counseling and educating patients, family members, significant others and care givers specific to the patient's diagnosis, management plan, prognosis and discharge will be discussed.

**CMD 531 Seminar in Acquired Disorders of Language II:** (3 Hours) Prerequisites: CMD 537 or equivalent. This course will address the incidence, pathophysiology, as well as communicative, mood and behavior changes in persons with dementia (including Alzheimer's disease), and those with traumatic brain injury across various cultures. The physiologic, cognitive, auditory and motor speech characteristics, as well as the language, pragmatic and discourse abilities of these individuals will be investigated. The social impact on the individual and the family will be reviewed. Professional services provided to the individual and caregiver, including differential diagnosis, assessment and rehabilitation, and the infusion of technology will be discussed. Direct and indirect communication management approaches, including individual and group therapy, stabilization strategies, the use of assistive and augmentative devices, and collaboration with other health care professionals will be explored. Educational intervention and transition to school/work after traumatic brain injury, as well as efficacy, ethical and legal issues pertaining to both disorders will be examined.

**CMD 532 Methods of Research:** (3 Hours) Prerequisite: Course in statistics. The student will learn to read critically and evaluate research in normal and disordered speech,

language, hearing and swallowing processes. The principles of research, research designs, issues in conducting unbiased research, types of research, observation, measurement, statistical treatment and reporting of data will be explored. The student will be guided in developing an intuitive understanding of clinical research methodology and integrating it with core statistical concepts and techniques.

**CMD 535 Augmentative and Alternative**

**Communication:** (3 Hours) This course focuses on approaches to the development of augmentative and alternative modes of communication for individuals of all ages with limited oral communication. The skills to effectively evaluate, select, and properly use a variety of gestural and symbol-based communication systems will be developed. Factors that affect assessment and treatment, such as, severity, age, cultural differences, nature of disorder, etc. will be discussed.

**CMD 537 Neuroanatomy and Neuro-physiology:** (3 Hours) The neuroanatomy and neurophysiology of the central and peripheral nervous systems will be discussed with emphasis on structures that control language, speech and swallowing. The student will learn about the normal embryonic development of the nervous system, and the critical periods of susceptibility to teratogenic agents. The neurological examination and pertinent diagnostic issues including variations in different countries and cultures will be investigated. Signs, symptoms and sequelae of pathological agents will be correlated with clinical implications. Rehabilitation issues will be addressed.

**CMD 540-549 Advanced Clinical Practice in Speech-Language Pathology:** (1-6 Hours) The student will provide supervised screening, diagnostic and treatment services to persons of all ages, from culturally diverse backgrounds, presenting with speech, language, cognitive, swallowing, or hearing disorders. Clinical experiences will include assessment and treatment planning, report writing, oral and written communication with other professionals and family members, client/family education, and counseling. Clinical sites will vary depending on student needs, interest, competency, and availability.

**CMD 550 Professional Issues in Speech-Language Pathology:** (1 Hour) Prerequisite: Permission of instructor and academic advisor. This course will focus on topics such as professional standards, quality improvement, outcome measures, ethical considerations, funding sources, third party reimbursement, work force issues, health care legislation, as well as the role of professional organizations in developing policies that impact speech-language pathology. Approaches to planning, managing and marketing speech-language pathology services in various communities, cultures and practice settings will be discussed.

**CMD 555 Speech-Language Pathology in the Medical Setting:** (2 Hours) This course will prepare students to work in medical settings with professionals and patients of all ages and cultural backgrounds. The organizational structure of institutions such as managed care organizations, home-health agencies, long-term care facilities, and acute, sub-acute and rehabilitation hospitals will be explored. Students will learn appropriate protocols, abbreviations, and universal precautions used in most medical settings.

**CMD 558 Seminar in Multicultural Issues:** (2 Hours) This course will focus on the historical origins, rules and features of nonstandard English dialects. Normal language and speech acquisition in speakers from culturally/ethnically and linguistically diverse groups will be examined. Strategies to distinguish individuals with communication differences from those with communication disorders will be identified.

Students will learn about current clinical standards and practices associated with service delivery to speakers from different backgrounds in respect to race or ethnicity, age, gender, national origin, sexual orientation and disability.

**CMD 563 Speech and Clinical Instrumentation:** (2 Hours) This course includes work in the speech science lab and in the clinic where students will obtain hands on experience in the use of equipment to study the acoustics of speech and hearing. Students will also learn the proper use of instruments in research activities and clinical assessment/intervention procedures. Experience in instrumental measurement and analysis of physical, physiological, perceptual and acoustical aspects of normal and abnormal speech production will provide valuable insight in understanding theoretical concepts introduced in other courses.

**CMD 565 Seminar in Fluency Disorders:** (2 Hours) Prerequisites: Permission of instructor and academic advisor. Current as well as historically relevant theories of stuttering and its etiology will be considered. Students will develop skills to identify and classify various types of dysfluencies as well as the social, emotional, cultural, vocational, and economic impact of stuttering. Assessment and intervention strategies for children, adolescents and adults who stutter will be presented.

**CMD 570 Seminar in Aural Rehabilitation:** (3 Hours) Prerequisites: Courses in audiology and normal language development. This course is an advanced exploration of the critical role of hearing in normal language, speech and psychosocial development. The effects of hearing loss on communication across the life span, and the importance of early intervention and counseling will be investigated. Assessment of oral, signed and written language, speech and voice production, auditory discrimination and perception, and speech reading skills will be discussed. Scales used to assess specific communication breakdown and resultant attitudes will be identified. Treatment options and communication strategies, including the use of amplification systems, assistive listening devices, sensory aids and cochlear implants will be explored. Pertinent legislative and multicultural issues will be reviewed. Assessment and management of auditory processing disorders will be addressed.

**CMD 572 Communication Behaviors and the Aging Process:** (2 Hours) Current research and theory concerning age-related changes in communication and swallowing due to anatomical, physiological and cognitive changes will be reviewed. The influence of attitudes and expectations, the effects of cultural, psychological and pharmaceutical variables, the role of genetic factors and deleterious environmental influences will be analyzed. Appropriate modifications in assessment and management procedures to meet individual needs in different health care settings, including the use of group treatment and a collaborative management approach will be discussed. Counseling and assistance provided to caregivers and members of the extended social support network will be explored.

**CMD 575 Seminar in Organic Speech Disorders:** (3 Hours) Prerequisites: Courses in anatomy and physiology of the speech mechanism, neuroanatomy, neurophysiology and articulation disorders or permission of instructor. This course is a comprehensive study of the theory and research related to underlying neurological pathology, salient features, confirmatory signs, diagnosis and treatment of motor speech disorders across the life span. The etiology and classifications of congenital orofacial anomalies and

dentofacial growth problems, genetics of clefting and associated syndromes, including those typically associated with specific racial and ethnic groups will be explored. Acoustical, perceptual and instrumental measures in assessment, as well as models of service delivery and management procedures will be discussed. Pediatric care and feeding of the newborn with a cleft, and complications associated with clefting and craniofacial disorders will be reviewed.

**CMD 578 Seminar in Voice Disorders:** (3 Hours) Prerequisites: Courses in anatomy and physiology of the speech mechanism and speech science. This course includes a comprehensive study of the models of voice production, as well as organic and functional voice disorders across the life span in culturally diverse populations. Etiology, signs, symptoms, and perceptual correlates of vocal pathologies and management will be discussed. The art of assessment including perceptual ratings and the use of contemporary equipment will be explored. Interdisciplinary collaboration in planning and monitoring treatment will be investigated. Communication and swallowing management of tracheotomized and ventilator dependent children and adults, as well as assessment and rehabilitation of head/neck cancer patients will be examined.

**CMD 580 Business and Management Aspects of a Speech-Language Pathology Practice:** (2 Hours) This course provides business and practice management principles and procedures for starting and managing a speech-language pathology practice, or in buying/selling an existing private practice. Topics of discussion include market analysis, marketing plan, operation and organizational plan, financial analysis, risk management, office automation, and personnel issues. Procedures for proper bookkeeping and accounting, strategies in pricing, and financial planning will be examined. Issues such as reimbursement, negotiating service contracts, continuous quality improvement, and risk abatement will be discussed.

**CMD 582 Special Problems in Speech-Language Pathology:** (2-4 Hours) Prerequisite: Permission of academic advisor and instructor. This course has varying content dealing with issues, trends and topics of current interest. Content will be developed based on assessed needs, interests and goals of a group(s) of students.

**CMD 585 Independent Study:** (3-6 Hours) Prerequisite: Permission of academic advisor and instructor. This course allows for the exploration of topics and/or issues based upon assessed needs, interest and goals of the individual student under the guidance of a faculty member. Typically, such a study will concentrate on an area not covered in other courses, or an area in which the individual student has developed particular interest and wishes to explore beyond what was covered in another course(s).

**CMD 589 Master's Project:** (3-6 Hours) Candidates for the Master of Science degree in Communicative Disorders may choose to complete a creative project within the student's professional area under the supervision of a graduate advisor within the Program. It is expected that this project will contribute to the knowledge base of the profession.

**CMD 590 Thesis:** (3-6 Hours) Candidates for the Master of Science degree in Communicative Disorders may choose to present a thesis that embodies independent research. The topic must be within the student's major professional area and must be approved by the student's thesis advisor within the program. It is expected that the research will contribute to the knowledge base of the profession.

## GRADUATE PROGRAMS IN PUBLIC HEALTH

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The Public Health degree is comprised of five academic disciplines offered within three academic departments:

### **BEHAVIORAL AND ENVIRONMENTAL HEALTH**

Dr. M. Shaw-Ridley, Chair & Professor  
Phone: (601)979-3103

#### **Faculty**

Dr. L. Akil, Assistant Professor  
Dr. N. Atehortua, Assistant Professor  
Dr. S. Leggett, Associate Professor  
Dr. S. McKinney, Assistant Professor  
Dr. J. Sims, Assistant Professor  
Dr. M. Shahbazi, Professor  
Dr. M. Sharma, Professor  
Dr. M. Shaw-Ridley

### **EPIDEMIOLOGY AND BIostatISTICS**

Dr. M. Payton, Chair & Professor  
Phone: (601) 979-8789

#### **Faculty**

Dr. A. Bhuiyan, Associate Professor  
Dr. S. Buxbaum, Assistant Professor  
Dr. J. Lee, Associate Professor  
Dr. A. Mawson, Professor  
Dr. V. Mendy, Assistant Professor  
Dr. A. Mitra, Professor  
Dr. M. Payton

### **HEALTH POLICY AND MANAGEMENT**

Dr. J. Buckner-Brown, Chair & Professor  
Phone: (601) 979-8789  
Email: healthpolicy.management@jsums.edu

#### **Faculty**

Dr. R. Bennett, Associate Professor  
Dr. J. Buckner-Brown, Professor  
Dr. E. Nwagwu, Professor  
Dr. S. Ochai, Clinical Assistant Professor  
Dr. M. Younis, Professor

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### **MASTER OF PUBLIC HEALTH (M.P.H.)**

This range of work includes healthcare, preventive and regulatory agencies, community health promotion service organizations, health policy organizations, and an array of health-oriented public, not-for-profit, and private groups. The concentrations for the Master of Public Health are as follows.

#### ***Concentration in Behavioral Health Promotion and Education***

This concentration focuses on the health related behavior of individuals in the context of socio-cultural structures, communities, healthcare systems, and family units. Of particular interest is how health-related behaviors of individuals are determined by and interact with conditions in the social, political, cultural, economic, physical, and biological environment to influence health status. Emphasis is placed on identifying, evaluating, and diminishing unhealthy behaviors and promoting positive personal health. This concentration seeks to integrate and apply health

behavior and social theories and methods to problems of human health. Assessment, planning implementation and evaluation of interventions with emphasis on behavioral sociocultural aspects of health are the core themes of the study of health promotion and education.

#### ***Concentration in Biostatistics***

Biostatistics is a public health discipline based on mathematical principles. It is a discipline that crosses all fields of public health, and biostatisticians are frequently consulted to address statistical problems in various fields of public health. Biostatisticians and epidemiologists work closely together in designing and analyzing studies.

Students in biostatistics are educated to acquire expertise in research, data analysis, data management, surveillance and monitoring, and problem solving. Emphasis is placed on understanding foundational theories in probability, sampling data, and utilization of statistical software packages.

#### ***Concentration in Environmental and Occupational Health***

Environmental and Occupational Health is designed to assess and analyze the relationship between basic science and environmental and occupational injuries and diseases. The environment has absorbed industrial chemicals, radiation, and other toxic substances that require ongoing investigation to determine the effects on human health. This concentration examines the science, policies, laws, and regulations that govern how environmental and occupational issues are handled. Furthermore, it provides knowledge and skills to design and implement prevention measures and promote healthy behaviors in the workplace. A key objective is to train and educate students to become effective leaders in the field of environmental and occupational health

#### ***Concentration in Epidemiology***

This concentration prepares students for careers as scientific researchers, practical field investigators, health officers, research program directors and managers, and other research areas of public health. Epidemiologists work closely with biostatisticians in designing and analyzing research studies. This concentration is designed for students to acquire a thorough understanding of epidemiological methods, statistical principles, and computer software applications to apply to the practical fields of public health. It offers students an opportunity to acquire specific skills in designing research studies and knowing how to collect data, analyze, and interpret research studies.

#### ***Concentration in Health Policy and Management***

This degree concentration prepares students for careers in public health policy and healthcare management. This concentration provides the student with core competencies in management, strategic planning, marketing, human resource management and motivation. Students evaluate the role of governmental institutions in the policy process; examine policy models; and learn how health policy in the United States is uniquely different from that of other countries. Financial aspects of health care are offered to those in the discipline that plan to be future managers. Social and legal principles impacting healthcare delivery in the United States are other core components.



### Admission Requirements

Applicants must be admitted to both the Division of Graduate Studies and the MPH Program. To facilitate determination of admissions into the MPH Program, applicants must send materials to both the Division of Graduate Studies and the MPH Program. Applications may be found on-line with the Division of Graduate Studies and the various programs in the School of Public Health (Initiative). Applicants will be admitted twice a year during the Fall and Spring semester. This information must be sent to the program:

- ◆ A personal statement of professional goals
- ◆ Three letters of reference must be submitted with the completed application forms, which may be obtained from the Division of Graduate Studies

### Regular Status

Applicants must have a baccalaureate degree from an accredited college or university with a 3.00 or better cumulative grade point average. International students must meet equivalent standards and possess a satisfactory score on the Test of English as a Foreign Language (TOEFL) Examination.

### Conditional Status

Applicants must have a baccalaureate degree from an accredited college or university with a 2.8-2.9 cumulative grade point average. International students must meet equivalent standards and possess a satisfactory score on the Test of English as a Foreign Language (TOEFL) Examination.

### Transfer of Credits and Other Requirements

A maximum of 9 graduate semester hours earned with a “B” or higher may be transferred from Jackson State University programs and other institutions toward the MPH degree. The transfer of these hours are subject to the discretion of the academic advisor, department chair and/or College Dean.

### Scholarships and Graduate Assistantships

Financial support may be offered (when available) to new and matriculating students holding regular admission status and maintaining at least a 3.35 program GPA as determined by the program. In order to remain eligible for financial assistance, students must maintain a minimum 3.35 cumulative GPA and remain in good professional academic standing (e.g., achieve a passing score on the Graduate Area Comprehensive Examination). Only full-time students (9-12 credit hours) are eligible for assistantships offered by the MPH Program.

### Academic Performance

Once admitted to the MPH program, graduate students are required to maintain a 3.0 or higher GPA to continue studies in good academic standing.

### MPH Curriculum

Full-time students can usually complete the curriculum in two and a half years. Part-time students usually require two or more additional semesters to complete the program. Most students are expected to graduate within three years. Students acquire the necessary professional knowledge, skills and competencies that qualify them for employment in public health and health service organizations in their specialized disciplines. The program must be completed with a 3.0 or higher cumulative GPA for the minimum 45 credit hours. The curriculum has four major components: core courses, required concentration courses, electives, and

the field practicum.

The core courses include the following basic subject studies as required by the CEPH: a) philosophy and historical basis of public health concepts; b) statistical basis of population health demography and quantitative, computer-based problem solving; c) epidemiological foundations of public health; d) social and behavioral determinants of community and personal health status; e) environmental and biological factors in public health; and f) management theory and practice of health and human services.

The MPH curriculum requires 6 core courses or 18 credit hours (3 hours per course) for all students. Each program assures that students take 5 required specialization courses or 15 credit hours for the advanced study in a specific public health concentration: Behavioral Health Promotion and Education, Environmental and Occupational Health, Epidemiology, Biostatistics, and Health Policy and Management.

Elective courses are offered in each concentration. Students may complete their two courses or 6 credit hours of electives within these specializations or other graduate level courses by advisor approval.

All students must complete a public health residency in the field. The Program will assist in the placement of students in field training which will account for 3 credit hours. Students will be placed in an organization for at least one full semester and commit a minimum of 400 clock hours during the semester under the supervision of a professional public health preceptor and faculty advisor. The location and specific residency activities will be worked out individually between the student, faculty of record for PHS 508, student advisor and preceptor and approved by the faculty member of record, prior to initiating the experience. Comprehensive “guidelines” will include appropriate covenants of mutual obligation between the university and the field agency through a written affiliation agreement. The purpose of this experience is to provide students with opportunities to apply and demonstrate their acquired knowledge and skill competencies in a public health setting as practice preparation for professional employment or doctoral studies upon graduation.

### Graduation Requirements

Students culminate their study program by taking PHS 508 Public Health Internship and PHS 507 Applied Master Project. A minimum of 45 semester hours with a cumulative average of 3.0 or “B” (on a 4.0 scale) or higher are required to earn the degree. The Graduate Comprehensive Examination must be taken and successfully pass with an aggregate score of 80 percent or above before graduation. The Graduate English Competency Examination must be passed during the first semester of graduate studies at Jackson State University and must be passed before graduation. Students who fail this test must successfully complete English 500- Advanced Laboratory Writing during their second semester of enrollment.

### Master of Public Health Curriculum

#### Behavioral Health Promotion and Education

#### Core Courses

Course Title	Semester Hours
PHS 501 Public Health and Behavioral Science	3
PHS 502 Public Health Policy and Administration	3

PHS 503	Biostatistics and Computer Applications	3
PHS 504	Environmental and Occupational Health	3
PHS 505	Principles of Epidemiology	3
PHS 506	Research and Quantitative Methods	<u>3</u>
		18

**Required Concentration Courses**

PHS 531	Health Behavior, Promotion and Education	3
PHS 532	Community and Patient Health Education	3
PHS 533	Wellness and Maternal Child Health Promotion	3
PHS 534	Communication and Health Education Marketing	3
PHS 535	Behavioral Change Program Strategies	<u>3</u>
		15

\*Elective courses 6

**Capstone Course**

PHS 507	Applied Master Project	3
PHS 508	Public Health Residency	3

**Total Hours 45**

*\*With approval from the faculty advisor and course instructor a student may take elective courses from other academic units at Jackson State University.*

**Environmental and Occupational Health**

**Core Courses**

Course Title	Semester Hours	
PHS 501	Public Health and Behavioral Science	3
PHS 502	Public Health Policy and Administration	3
PHS 503	Biostatistics and Computer Applications	3
PHS 504	Environmental and Occupational Health	3
PHS 505	Principles of Epidemiology	3
PHS 506	Research and Quantitative Methods	3
		<u>18</u>

**Required Concentration Courses**

PHS 541	Environmental Management & Industrial Hygiene	3
PHS 542	Environmental & Occupational Health Risk Assessment	3
PHS 543	Occupational Health & Safety Management	3
PHS 544	Environmental & Occupational Toxicology	3
PHS 545	Environmental Policy & Occupational Health Regulations	<u>3</u>
		15

\*Elective courses 6

**Capstone Courses**

PHS 507	Applied Master Project	3
PHS 508	Public Health Residency	3

**Total Hours 45**

**Epidemiology**

**Core Courses**

Course Title	Semester Hours	
PHS 501	Public Health and Behavioral Science	3
PHS 502	Public Health Policy and Administration	3
PHS 503	Biostatistics and Computer Applications	3
PHS 504	Environmental and Occupational Health	3
PHS 505	Principles of Epidemiology	3
PHS 506	Research and Quantitative Methods	3
		<u>18</u>

**Required Concentration Courses**

PHS 521	Advanced Seminar in Epidemiology	3
PHS 522	Multivariate and Probabilistic Statistics	3
PHS 523	Chronic and Infectious Disease Epidemiology	3
PHS 524	Statistical Methods for Applied Epidemiology	3
PHS 525	Epidemiology of Minority and Special Populations	3

\*Elective courses 6

**Capstone Courses**

PHS 507	Applied Master Project	3
PHS 508	Public Health Internship	3

**Total Hours 45**

*\*With approval from the faculty advisor and course instructor a student may take elective courses from other academic units at Jackson State University.*

**Biostatistics**

**Core Courses**

Course Title	Semester Hours	
PHS 501	Public Health and Behavioral Science	3
PHS 502	Public Health Policy and Administration	3
PHS 503	Biostatistics and Computer Applications	3
PHS 504	Environmental and Occupational Health	3
PHS 505	Principles of Epidemiology	3
PHS 506	Research and Quantitative Methods	3
		<u>18</u>

**Required Concentration Courses**

PHS 571	Statistical Theory	3
PHS 522	Multivariate and Probabilistic Statistics	3
PHS 572	Statistical Computer Application	3
PHS 524	Statistical Methods for Applied Epidemiology	3
PHS 601	Advanced Biostatistics and Computer Service Application	<u>3</u>
		15

\*Elective courses 6

**Capstone Courses**

PHS 507	Applied Master Project	3
PHS 508	Public Health Residency	3

**Total Hours 45**

*\*With approval from the faculty advisor and course instructor a student may take elective courses from other academic units at Jackson State University.*

**Health Policy and Management**

**Core Courses**

Course Title	Semester Hours	
PHS 501	Public Health and Behavioral Science	3
PHS 502	Public Health Policy and Administration	3
PHS 503	Biostatistics and Computer Applications	3
PHS 504	Environmental and Occupational Health	3
PHS 505	Principles of Epidemiology	3
PHS 506	Research and Quantitative Methods	3
		<u>18</u>

**Required Concentration Courses**

PHS 511	Organizational Design and Behavior	3
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PHS 512	Public Health Policy, Law and Ethics	3
PHS 513	Financial Management of Health Services	3
PHS 514	Health Information Management Systems	3
PHS 515	Marketing Public Health and Strategic Planning	3
		15
<b>*Elective courses</b>		6
<b>Capstone Courses</b>		
PHS 507	Applied Master Project	3
PHS 508	Public Health Residency	3
<b>Total Hours</b>		<b>45</b>

### **Important Notice for All MPH Students**

Students who enrolled in the MPH Program beginning in Fall 2016 and after are required to successfully pass the MPH internship (PHS 508) and PHS 507 Applied Master Project as part of the program graduation requirements. The culminating experience courses shall ONLY be taken after successfully passing the graduate area comprehensive exam (GACE). For students who entered the MPH Program on a full-time basis in the Fall 2008 and after, the full-time plans must be followed in each of the concentrations. Students admitted into the M.P.H. Program on a part-time basis in Fall 2008 and thereafter must follow their part-time plan in each of the concentrations. Full-time students are admitted for full-time study to one program only. Each student must complete a Degree Plan with the assistance of their advisor at the beginning of their first semester. The Plan will reflect a full-time or part-time cohort enrollment status. Transfer from (1) full-time to part-time student status, or, (2) part-time to full-time student status must be applied for and approved by the program of origin. A change of concentration must be approved by both the advisor and department chairperson. Transfers are not automatic.

### **Certificate in Public Health**

Jackson State University's Public Health Program has developed a "for-credit" certificate program comprised of approved and existing courses. Upon successful completion of the following five core knowledge areas of public health (15 graduate hours), a student (with a bachelor's degree) will be awarded "a Public Health Certificate." The courses include:

- PHS 501 – Public Health and Behavioral Science
- PHS 502 – Public Health Policy and Administration
- PHS 503 – Biostatistics and Computer Applications
- PHS 504 – Environmental and Occupational Health
- PHS 505 – Principles of Epidemiology.

For further information on the certificate program, please contact (601) 979-8806.

## **DESCRIPTION OF COURSES**

### **Core Courses**

#### **PHS 501 Public Health and Behavioral Science (3 hours)**

This course introduces public health organization and practice, including history, concepts, legal basis, purposes, programs and trends in the evolving of public and private sectors of social and preventive medicine in America. It discusses various behaviorally related health determinants, and presents a number of theories/models to change behaviors at individual and group levels.

#### **PHS 502 Public Health Policy and Administration (3 hours)**

This course presents an overarching introduction to

national legislative issues and policy processes together with the managerial functions and practices in public and private healthcare organizations. Study emphasis is on the essentials of how executive and supervisory managers professionally perform their roles in the work of leading system-wide teamwork, strategy building, reengineering, resource acquisition, and market effectiveness in competitive environments.

**PHS 503 Biostatistics and Computer Applications (3 hours)** This course introduces the principles and methods of statistical analysis. Topics include hypothesis testing, confidence limits, sample size, statistical tests of inferences, and simple linear and multivariate analysis. Statistical software packages such as SPSS and Stata will be used in illustrating the basic principles of data analysis.

**PHS 504 Environmental and Occupational Health (3 hours)** This course introduces major community health concerns and problems in the related fields of environmental and occupational health with an emphasis on disease and disability. Students will review and analyze the policy and ecological change implications of these two public domains.

**PHS 505 Principles of Epidemiology (3 hours)** This course explores the science and practice of epidemiology and its contributions to disease detection, measurement, and prevention in clinical and public health settings. Specific topics include measurement of disease frequency, measurement of disease association, standardization, bias, and study designs. This course also introduces the practical fields of epidemiology.

**PHS 506 Research and Quantitative Methods (3 hours)** This course introduces students to applied research methods in public health. It emphasizes essential concepts, techniques and methods of research practice. Basic measurement procedures for analyzing health data are examined through SPSS computer software, and the student is required to complete the design of a research study. Prerequisites: PHS 503 and PHS 505.

### **Capstone Courses**

**PHS 507 Applied Master's Project (3 hours)** The Masters' Research Project provides a culminating experience of the student's scientific and professional practice preparation, including proposal formulation of the problem to be studied or an operational project to be implemented with the evaluating conclusion and defending report of the outcome. It must be taken during the final year of enrollment in the program. Prerequisite: PHS 506 Research and Pass Graduate Area Comprehensive Exam.

**PHS 508 Public Health Internship (3 Hours)** Students conclude their MPH studies with a supervised field experience in their respective specializations. This supervised residency practice operates for the full semester with a student commitment of a minimum of 400 clock hours with the placement organization, recognizing flexible arrangements for the mutual benefit of all parties and including possible compensation. It must be completed in one semester, which is the LAST semester of enrollment in the program. The program, student, preceptor and field setting will abide by a formal affiliation agreement, which provides policies and guidelines for the placement expectations and responsibilities. It culminates with an analytical focus on the student's concentration area. The report should emphasize the learning objectives and competencies for the internship. Enrollment requires permission of the advisor, the instructor of record, and department chairperson. Completion of the course requires the agency's preceptor's evaluation. Prerequisite: Pass Graduate Area Comprehensive Exam.

## **Required Courses**

### ***Health Policy and Management***

#### **PHS 511 Organizational Design and Behavior** (3 hours)

This course examines universal organizational theories which adapt to private healthcare and public health services. Students study a framework of analysis examining the management science explanations of human behavior in these settings from the perspectives of individual worker and patient roles, group and team relationships, and global systems. Topics include professional understanding of organizational culture, conflict, strategic design, change, measuring performance, and creating alliances.

#### **PHS 512 Public Health Policy, Law and Ethics** (3 hours)

This course provides an overview of principles and policies relating to public health law and ethical applications. This course will explore federal laws and directives, along with state statutes and local ordinances. Recent case laws from federal and state courts will be used as illustrations.

#### **PHS 513 Financial Management of Health Services** (3 hours)

This course explains important financial management techniques applicable to health care settings. Course materials will include the language and function of financial management, analysis of an organization's financial position, management of working capital and current assets, budgeting, and the use of financial data for decision making. Students will further their knowledge of computerized information systems through class exercises. Emphasis will be placed on the application of techniques to health services organizations. Students will synthesize techniques through completion of an analysis project and/or research paper in health economic and financing. Prerequisite: HCA 450 or instructor approvals.

#### **PHS 514 Health Management Information Systems** (3 hours)

This course introduces students to systems in managing for-profit and not-for-profit organizations (such as manufacturing, banking, and health care organization) and emphasizes the role of information systems to increase productivity, to improve quality of products and services, and to insure overall effectiveness or organizational operations. Appropriate application software will be used to analyze cases and complete the class project. Prerequisite: Basic knowledge of computing skills.

#### **PHS 515 Marketing Public Health and Strategic Planning** (3 Hours)

This course examines an overview of the strategic planning process and state-of-the-art marketing applications used by community health organizations. Marketing is viewed as a social change opportunity for public health practitioners and the analysis and design of market plans are studied. As an extension of the marketing audit, several key planning strategies and methods are critically reviewed for their relative value to managers and stakeholders in decision making of long-range and short-term system futures.

### ***Epidemiology and Biostatistics***

#### **PHS 521 Advanced Seminar in Epidemiology** (3 hours)

The hallmark of the course is designing and presenting an epidemiological research study. Emphasis will be placed on the major types of epidemiological study designs: cross-sectional, case-control, cohort, and intervention studies. In addition, diagnostic studies to evaluate screening programs will be discussed. Prerequisite: PHS 505.

#### **PHS 522 Multivariate and Probabilistic Statistics** (3 hours)

This course addresses modeling and practical application of statistical principals in data analysis.

Statistical Software packages such as SAS and SPSS will be used. Topics include probability distributions, simple linear regression, multiple linear regression, log linear modeling, logistic regression, Poisson, and Cox-Proportional Hazard modeling. Prerequisites: PHS 503 and PHS 505.

#### **PHS 523 Chronic and Infectious Diseases Epidemiology** (3 hours)

This course introduces students to various fields of practical epidemiology. This course primarily addresses the epidemiology of cancer, cardiovascular, and infectious diseases. Prerequisite: PHS 505.

#### **PHS 524 Statistical Methods for Applied Epidemiology** (3 hours)

This course reviews the basic statistical tools used in epidemiology research. The course includes: sampling and sample size determination, methods to compute confidence intervals and p-values for key epidemiological measures of association, and an overview of regression and statistical methods for analysis of data. Prerequisite: PHS 503 and PHS 505.

#### **PHS 525 Epidemiology of Minority and Special Populations** (3 hours)

This course introduces the salient features of conducting epidemiological research in special populations with a particular emphasis on African Americans. This course covers the epidemiology of diseases and conditions affecting racial/ethnic minorities, children and the elderly. Other components include psychological and behavioral factors and preventive services. Prerequisite: PHS 505.

#### **PHS 571 Statistical Theory** (3 hours)

This course is an introduction to the mathematical foundation of statistics and statistical theory. It provides an in depth coverage that includes probability theory, probability distributions, random variables, theories of statistical testing, interval estimation, and hypothesis testing. The course starts with defining a sample space and the random variable then expounds to include distribution and density functions and concludes with applications of hypothesis testing and confidence interval estimation. Prerequisites: PHS 503 or an equivalent introductory course in biostatistics.

#### **PHS 572 Statistical Computer Applications** (3 hours)

The purpose of this course is to teach two statistical computing applications: Statistical Packages for the Social Sciences (SPSS) and Statistical Analysis Software (SAS). This course covers the basic and intermediate applications of these two statistical programming applications. For SPSS, students will learn the following: the basic components of the software (input, analysis and output interfaces), using the data editor, creating SPSS data file, create and recode variables, and set properties of variables. For SAS, students will learn the following: components to a SAS program, syntax of SAS program, comment statements, the various features of the Data Step, Procedure (PROC) Steps, common features of both Steps, and SAS Utilities will be covered in much detail. Students will apply the knowledge and skills acquired to the generation of statistical reports using descriptive statistics and related charts. The common feature of the PROC Step of statistical methods ranging from Descriptive Statistics through Analysis of Variance.

#### **PHS 601 Advanced Biostatistics and Computer Science Applications** (3 hours)

This course is an advanced, intermediate level course in biostatistics with emphasis on statistical and analytical techniques important to researchers and practitioners within the public health setting. This course provides in depth coverage of bio-statistical methods including statistical inference, sample size calculation, and multivariate regression techniques. This course is offered as an advanced PSH 701 with modification in the theoretical exercises and course expectations for examinations. Prerequisites: PHS 503, PHS 506 and PHS 572.

### ***Behavioral Health Promotion and Education***

**PHS 531 Health Behavior, Promotion and Education** (3 hours) This course provides a comprehensive understanding of health promotion and health education, concepts and applications. It offers students an opportunity to develop a broad understanding of social, cultural and psychological factors as they affect health and health-related behaviors and outcomes at individual, family, and group/community levels. Areas of responsibilities for health educators, as required by the National Commission for Health Education Credentialing (NCHEC) body, are discussed, and students gain competencies essential to pass the Certified Health Education Specialist (CHES) examination. The CHES related skills and competencies in combination with an MPH degree create better job opportunities at state and national levels.

**PHS 532 Community and Patient Health Education** (3 hours) This course examines professional health education practices in most community and individual settings where opportunities exist to acquire and behaviorally deploy personal health knowledge into action. Health risk factors are studied using the socioecological paradigms applied to a selected community. Furthermore, the roles of the health educator as a community advocate, facilitator and collaborator are explored. Patient education in clinical settings focuses on equipping clinical personnel in the competencies and skills of health promotion techniques. Prerequisites: Completion of all MPH core courses and PHS 531.

**PHS 533 Wellness and Maternal Child Health Promotion** (3 hours) This course provides the historical perspective, organization and delivery of maternal child health services as well as an analysis of the major health determinants associated with the system of health care and health promotion for this population. Ethical issues, cultural diversity, special and vulnerable populations, disparate health outcomes, environmental health and nutritional issues will be emphasized while highlighted strategies to overcome barriers in health promotion and provision of care.

**PHS 534 Communication and Health Education Marketing** (3 hours) This course provides an overview of communication and marketing within a health education context. It examines communication in health care settings, public health campaigns, cultural differences in communication, and communication designed to promote health equity. Prerequisites: Completion of all MPH core courses, and PHS 531.

**PHS 535 Behavioral Change Program Strategies** (3 hours) This course examines the behavioral science theories which underpin the fundamental ingredients of most change strategies in continuous health program development. Several models/theories that are designed to alter behaviors are discussed. Theories and models of health perception, health promotion and education along and program planning, research and evaluation are explored. Theories of individual health behavior (e.g., Health Belief Model); interpersonal theories (e.g., Social Cognitive Theory), and models for community level behavioral change (e.g., PRECEDE-PROCEDE Model) are discussed; and their applications are shown through research, practices, and actual projects that students undertake in targeted populations. Students also evaluate both classroom case studies and the actual community implementation of health behavior change programs. Prerequisite: PHS 531 Health Behavior Promotion and Education.

### ***Environmental and Occupational Health***

**PHS 541 Environmental Management and Industrial Hygiene** (3 hours) This course introduces students to the basics of Environmental Management and Industrial Hygiene. The course will be divided into two parts. Part I will help students understand the regulatory approaches, effects of pollution and the source of pollutants, and the various environmental management issues. Part II will place an emphasis on control of occupational health hazards that arise as a result of work or during work. Prerequisites: PHS 504.

**PHS 542 Environmental and Occupational Health Risk Assessment** (3 hours) This course assists the student in developing the skills necessary to assess, evaluate and recommend control measures to reduce environmental and occupational risks. This course will involve the study of chemical exposures and the harmful actions of chemicals on humans. Students will study scientific methods currently employed to assess human risks to environmental and occupational contaminants.

**PHS 543 Occupational Health and Safety Management** (3 hours) This course introduces the field of safety, prevention management, and issues in occupational health. This course will provide the opportunity for the student to apply public health principles and decision-making skills with relation to prevention of injury and disease, health promotion, and protection of worker populations from occupational hazards.

**PHS 544 Environmental and Occupational Toxicology** (3 hours) This course examines the basic concepts of toxicology and demonstrates how the basic principles are applied in occupational and environmental regulations. Toxicology, the study of the adverse effects of chemical or physical agents on biological systems, is a pillar of both clinical medicine and public health. Students will acquire the armament to develop, interpret, and utilize toxicological data for solving environmental and occupational health problems.

**PHS 545 Environmental Policy and Occupational Health Regulations** (3 hours) This course examines Federal laws and regulations concerning environmental and occupational health. This course will introduce students to State environmental policies and occupational health regulations while and emphasize implementation and compliance with environmental and occupational health regulations and laws. Prerequisites: PHS 543.

**PHS 551 MCH-Nutrition Program Management** (3 hours) This course provides application of core public health functions to the field of maternal and child health and nutrition. Emphasis is on assessing community nutrition-related assets and problems, principles of grant writing, program planning, administration, budgeting, and evaluation; and leadership skills. Use of the media and social marketing is also covered.

### **Electives**

**PHS 516 Human Resources Management in Public Health** (3 hours) This course examines the role of healthcare administrators and supervisors with respect to personnel interviewing, selection, orientation, performance counseling and appraisal; staff development; leadership development; and related functions of human resources management. Issues of job analysis, labor relations, performance appraisal, training and development, and other concerns are studied in relationship to the human resource process system.

**PHS 517 Managed Care Networks and Public Health** (3

hours) This course introduces the dynamic impact that managed care has had on the delivery of healthcare services and cost containment features of the health plans that thrived in the 1990's. The student will become familiar with all aspects of managed care (HMOs, PPOs, and POS) from effectiveness measurement of these health care plans medical/loss ratios, profit margins and outcomes measurement to the effect on access to quality healthcare services.

**PHS 518 Policy Analysis of Health Legislation and Regulation** (3 hours) This course identifies public policies that direct and or influence health care in the United States. Health legislation and regulations that support the implementation of policies will be analyzed. Policies will also be analyzed to determine their strategic importance and implications for individuals, communities and organizations.

**PHS 519 Health Program and Evaluation** (3 hours) This course provides an overview of theories and application of program planning, implementation, and evaluation for public health programs while emphasizing essential components of program planning models and a range or evaluation objectives and designs.

**PHS 526 Environmental and Occupational Epidemiology** (3 hours) This course introduces the student to the application of epidemiological principles to environmental and occupational health problems. Topics include exposure assessment, study design, and conduct of epidemiological studies in the environment and work place, and the effect on the healthy worker. Also examined will be epidemiological research on a range of known environmental and occupational hazards. Prerequisite: PHS 505.

**PHS 528 Genetic Epidemiology** (3 hours) This course focuses on the pattern of disease incidence in populations in order to infer the genetic basis of the disease. This course includes studying the extent to which environmental risk factors interact with genetic risk factors to increase susceptibility and manifestation of disease. Prerequisite: PHS 505.

**PHS 529 Psychosocial Epidemiology** (3 hours) This course provides an overview of the literature incorporating social and personality factors, cultural influences upon individual behavior, stress, and related psychosocial factors as determinants of health. Health and illness determinants are multi-factorial and enmeshed in the social fabric and psychologic constitution of the person and may involve a complex interaction of the person and environment. Psychosocial epidemiological models of chronic disease will be discussed. Prerequisites: PHS 505.

**PHS 536 Health Education Competencies for Clinical Professionals** (3 hours) This course examines the principles, methods and skills of education and promotion practices in alternative health services and medical care settings. Students learn why and how health professionals are able to teach and influence patient clientele roles and behaviors in supportive healing interventions of the healthcare environment. Clinical applications of health promotion and education address risk factor assessment, self-care, patient-program readiness, institutional decision- making, consumer culture, and emotional stress management. This study leads to the professional acquisition of skills to design and implement effective program planning, evaluation, and training of healthcare personnel and their patients.

**PHS 537 Medical Anthropology in Public Health** (3 hours) This course explores the fundamental relationship of anthropology to the art and science of medicine and public health, broadly defined. Readings and lectures emphasize the impact of anthropology on current modes of biomedical

research; alternative systems of health and healing including culture-bound syndromes; the role of anthropologists in biomedicine and public health; critical medical anthropology and the political economy of health; and the interplay between anthropology and other components of public health. Concepts of efficacy, outcome, and healing are also examined.

**PHS 552 Women's Health and Preventive Medicine** (3 hours) This course addresses determinants of health, morbidity, and mortality across several transitions of the life-span of women; explores biological, behavioral, environmental and societal influences; and provides an integrated approach to women's health issues and public health policy, practice, and research.

**PHS 553 Child Adolescent Health and Preventive Medicine** (3 hours) This course analyzes child and adolescent public health issues, stressing the social, developmental, and environmental determinants of health status. The interrelationship of developmental issues, risk behavior, care-seeking behavior, and the effectiveness of adolescent programs and services will be examined.

**PHS 554 MCH/Nutrition Programs and Public Policy** (3 hours) This course integrates maternal and child health and nutrition programs and policies to provide the foundation for advocacy and the development of health services for women, children, and their families. The historical foundation, organization, and delivery of maternal and child health and nutrition services and the influence of public policy are reviewed. Major issues such as cultural sensitivity, financing, unique needs of vulnerable groups (such as minority populations and children with special health care needs) and the social and environmental influences on health and the delivery of services are covered.

**PHS 555 Maternal and Child Nutrition** (3 hours) This course presents important aspects of growth and development, nutritional requirements and concerns, and dietary recommendations from conception to adulthood. Emphasis is on the special nutritional concerns of minorities and the medical, psychosocial, and environmental factors influencing nutritional status. Topics in current controversies, chronic disease prevention, nutrition education, and health promotion are also covered.

**PHS 556 Cultural Nutrition and Health Disparities** (3 hours) This course addresses food and its role in the culture and food beliefs and practices of various religious and ethnic groups in the United States. It emphasizes the impact of culture, socio-economic differences, and other factors on food practices and health beliefs to prepare students to provide culturally sensitive services to communities and clients.

**PHS 557 Sports, Wellness, and Contemporary Nutrition Issues** (3 hours) This course examines the scientific basis for diet and exercise recommendations, nutritional needs and concerns of athletes, ergogenic aids and nutrition supplements, eating disorders, health benefits and risks of vegetarian diets, and promotion of physical activity and healthy eating habits. Current nutrition issues and controversies covered include research in weight management and obesity treatment, high protein, low carbohydrate and other weight loss diets, health benefits of phytoestrogens and functional foods, food irradiation and biotechnology, dietary supplements and alternative nutrition and herbal therapies. Modern and ancient approaches to diet and exercise are explored.

**PHS 561 Administration of Integrated Health and Hospital Systems** (3 hours) This course focuses on the complex and essential interrelationships that exist within and among healthcare entities. The course will (1) identify and

study components of the healthcare system (hospitals, clinics, home care agencies, hospice care, emergency medical services, etc.) and discuss the interrelationships necessary for their survival and (2) explore the variety of arrangements (networks, systems, alliances, etc.) used to integrate and manage these entities. The course illustrates that survival within the healthcare industry is largely predicted upon an entity's ability to partner with other healthcare providers.

**PHS 562 Nursing and Mental Health Facilities Administration** (3 hours) This course focuses on the essential function of management and administration within nursing and mental health facilities. Attention will be given to the multitude of facets of management and administration and the theoretical and practical foundation of each facet. Attention will also be given to environmental factors, both internal and external, that managers must attend to within the nursing and mental health environment.

**PHS 563 Primary Care and Group Practice Management** (3 hours) This course focuses on management issues pertaining to the primary care and group practice settings in healthcare. This course will deeply explore a variety of management aspects, stressing management implementation strategies and techniques in the practice setting.

**PHS 564 Comparative and International Health Systems** (3 hours) This course introduces important methodological approaches to comparative analyses. For analytical purposes, the health systems of the world will be classified into four major categories. Important examples from each of these categories will be discussed. Specific objectives of the course are: to discuss the health system categories and their determinants; to identify important components of a health system; and to illustrate the health system categories by selecting country case studies. Health care reform proposals of various countries will also be discussed.

**PHS 565 Health Care in Developing Countries** (3 hours) This course introduces the students to health care in settings with severe resource constraints, rapid population growth, critical competing priorities, poor data collection, and high disease burden. Students are prepared for effectiveness in international health by studying infectious disease control, nutrition, environmental health, health practices, and needs for sustainability as they apply to the tropical setting.

**PHS 587 Special Topics in Public Health** (3 hours) This course enables students to pursue a topic or project of their choice in Public Health, such as health disparities, prevalent illnesses in Mississippi and the US, e.g., diabetes and obesity, HIV/AIDS, cardiovascular ailments, and stroke; international health systems; interventional studies in public health; and tropical diseases, e.g., leprosy, onchocerciasis, trypanosomiasis, malaria, and yellow fever. The course provides MPH student's additional research methods training and skills in their public health concentration. Consent of the Executive Director required.

**PHS 598 Contemporary Issues in Public Health** (1-3 hours) This course highlights selective topics in public health relevant to today's changing public health forum and environment. The topics are designed to encompass a broad range of public health issues. Thus, topics for discussion are addressed within each of the following core areas of public health: Behavioral Health, Biostatistics, Environmental Health, Epidemiology and Health-Related Conditions, and Health Care Planning and Organization.

**PHS 599 Independent Study** (1-3 hours) This is an individual directed study in a specific concentration of public health selected by the student and approved by the

professor.

## **DOCTOR OF PUBLIC HEALTH (Dr.P.H.)**

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The Doctor of Public Health is offered in a specific concentration through the following departments:

**Behavioral and Environmental Health** - with a concentration in Behavioral Health Promotion and Education

**Epidemiology and Biostatistics** - with a concentration in Epidemiology

**Health Policy and Management** - with a concentration in Health Policy and Management

### **Overview**

The Doctor of Public Health degree provides a foundation of core and elective courses beyond the master's degree that will prepare the student for leadership in public health research and/or practice. This includes a dissertation that involves independent study under a faculty mentor. The specific program at Jackson State University focuses on eliminating disparities in health and healthcare.

The Dr.P.H. Degree Program prepares students to assume leadership roles in public health, especially as research scientists, administrators, educators, or practitioners. Such roles can be expected to include, but not be limited to, positions in organizations and agencies such as universities, public health agencies, hospitals, managed care organizations, pharmaceutical companies, research firms, and other settings where public health specialists are employed.

The program will include advanced theoretical and practical studies in the specialized fields of public health as well as the preparation of a dissertation. The dissertation will establish the student as a competent researcher and scholar, capable of conducting and supervising independent research studies. Students will be trained to study public health from a multidisciplinary perspective to appreciate the disparities affecting minorities in terms of health and healthcare services.

Students will master core competencies in public health as well as specialized courses in their chosen concentration. They will develop a high level of analytical (quantitative and qualitative research) skills, complemented by an extensive breadth of relevant leadership knowledge in research grant preparation, management, study implementation and evaluation.

### **Admission Requirements**

Requirements for admission to the Dr.P.H. program include dual admission to the Division of Graduate Studies and to the program itself. All students seeking admission to the program must meet the following criteria:

- ◆ A master's degree in Public Health from an accredited college or university.
- ◆ Dr.P.H. program and Division of Graduate Studies applications.
- ◆ An minimum overall GPA of 3.3 or above (on a 4.0 scale) on the highest earned degree.
- ◆ Two official transcripts from all universities or colleges attended prior to program application.
- ◆ A satisfactory score on the GRE taken within the last five years.

- ◆ Three letters of recommendation with at least two from academic professionals.
- ◆ Statement of purpose reflecting applicant's career goals in public health. Recommendation by the program steering committee.
- ◆ For international applicants, satisfactory performance on TOEFL demonstrating oral and written proficiency.

Admission to the Division of Graduate Studies does not automatically guarantee admission to the Dr.P.H. Program. **The priority deadline for the Fall admission is March 1.**

### Residency Requirements

The minimum period of residency for the degree in Public Health is two years or the equivalent of enrollment for four consecutive semesters. The students must be full-time and therefore must take at least nine credit hours each semester counted toward residency. The student must meet the minimum residency requirement prior to taking the comprehensive examination.

### Time Limit for Degree

A student has seven (7) years from the initial semester of enrollment to complete all requirements for the DrPH degree. Failure to satisfy all requirements during this period may result in suspension up to dismissal.

### Degree Requirements

The Dr.P.H. curriculum provides a broad grounding in overall public health knowledge and skills in addition to an in-depth learning experience within the program concentrations. The curriculum represents an interdisciplinary approach and bridging of academic core areas.

### Community Research Practicum

Students are required to spend a minimum of 100 clock hours per semester in the community health research practicum. A minimum of three hours per week must be on site. The research practicum, which begins the second semester of enrollment, requires three continuous, one-semester hour courses, which culminates in the final semester. A written and oral presentation of the community research project and the submission of a manuscript to a refereed journal for publication review are required to complete the third course. Students are required to present at a fall colloquium after completion of the three consecutive semesters of field experience.

### Transfer of Credits

Students accepted into the program may transfer up to nine (9) credit hours of graduate work from an accredited institution of higher education at the discretion of the academic faculty, Program Chair, and School Dean.

### Course Requirements

#### Candidates with a Master of Public Health degree

The curriculum is divided into advanced core courses (21 credit hours), concentration courses (15 credit hours), two electives (6 hours), a community research practicum (3 credit hours), and a dissertation. The advanced core courses (21 credit hours) are required for each concentration. The required concentration courses are specific to each concentration. Electives (6 credit hours) expand the student's focus within a specific concentration. Although electives may be selected from other disciplines, including non-public health degree programs, they must be related to the concentration of interest and approved by the doctoral

program advisors.

The community research practicum – the field residency – is based on research and issues related to crosscutting competencies for each student's concentration. The practicum allows students to develop insight into planning their dissertation so that research can be focused on addressing practical concerns in public health and the community. Students are required to complete a minimum of 45 credit hours plus a dissertation. Students with an MPH may transfer up to nine credits.

#### Candidates without a Master of Public Health degree

All students without a Master of Public Health degree are required to successfully complete introductory public health core courses in each of the five core areas of public health (500 level): epidemiology, biostatistics, environmental and occupational health, health policy and management, and behavioral health. Students who have not completed their introductory core courses must complete these courses prior to beginning their advanced (700 level) courses.

Upon admission into the program, students must choose a concentration in public health for their doctoral studies. The course requirements for the concentrations of Behavioral Health Promotion and Education, Epidemiology, and Health Policy and Management are listed below.

### Advanced Core Courses

Course Title	Semester Hours
PHS 701 Advanced Biostatistics and Computer Science Applications	3
PHS 702 Disease Pathogenesis and Behavioral Risk Factors	3
PHS 703 Designing Research Studies on Minorities and Special Populations	3
PHS 704 Survey and Qualitative Research Methods	3
PHS 705 Advocacy and Public Health Policies	3
PHS 706 Principles of Environmental and Occupational Health	3
PHS 711-713 Advanced Biostatistics Laboratory (I-III) (1 hour per course)	<u>3</u>
	21

### Concentration Courses

Required Courses (See Specific Concentrations Below)	15
Electives (Related to the concentration)	6
Community Research Practicum	3
Dissertation (maximum 15 credit hours)	15

**Total Hours (not including dissertation) 45**

### Concentration Courses

The course requirements for the concentrations of Behavioral Health Promotion, Environmental and Occupational Health, Epidemiology, and Health Policy and Management:

#### *Behavioral Health Promotion and Education*

#### **(Required Concentration Courses)**

PHBS 711 Advanced Theories and Scientific Principles for Health Promotion



	and Education	3
PHBS 712	Behavioral and Psychosocial Epidemiology	3
PHBS 713	Qualitative Research Methods	3
<i>(Two of the following)</i>		
PHBS 714	Clinical Trials and Interventional Study Designs	3
PHBS 715	Research Seminar in Health Promotion	3
PHBS 716	Social and Cognitive Bases of Behavior	3
PHBS 717	Data Base Management Systems	3

### *Epidemiology*

<b>(Required Concentration Courses)</b>		
BIOS 711	Categorical Data Analysis	3
EPI 711	Behavioral and Psychosocial Epidemiology	3
EPI 712	Clinical Trials and Interventional Study Designs	3
<i>(Two of the following)</i>		
BIOS 712	Multivariate Analysis I	3
EPI 713	Infectious Disease Epidemiology	3
EPI 714	Nutrition and Genetic Epidemiology	3
EPI 717	Environmental Epidemiology	3

### *Health Policy and Management*

<b>(Required Concentration Courses)</b>		
HPM 711	Strategic Leadership in Management of Human Resources	3
HPM 712	Public Health Economics	3
HPM 713	Analysis of Health Legislation and Regulations	3
<i>(Two of the following)</i>		
HPM 714	Evaluation of Performance and Quality of Health Service Organizations	3
HPM 715	Decision Modeling	3
HPM 716	Administration of Integrated Health and Hospital Systems	3
HPM 717	Managed Care Networks and Public Health	3

## **DESCRIPTION OF COURSES**

### **Interdisciplinary Courses**

**PHS 701 Advanced Biostatistics and Computer Science Applications** (3 Hours) This is an advanced course in biostatistics with emphasis on statistical inference, sample size calculations, and multiple regression techniques. The course emphasizes the use of computer software packages in conducting statistical procedures. The software packages include SPSS, SAS, Epi Info, GIS, and others. Emphasis is placed on selecting the appropriate statistical test and the most appropriate analytical procedure. Advanced Biostatistics Lab I course (PHS 711) must be taken simultaneously with this course.

**PHS 702 Disease Pathogenesis and Behavioral Risk Factors** (3 Hours) This course addresses the major behavioral factors causing diseases in the nation. The course focuses on cardiovascular disease, cancer, HIV, and other chronic diseases. Disease pathology and pathogenesis are described, and their major determinants and behavioral risk factors are examined. Current models and theories of disease prevention and health promotion are addressed. Students will learn how to implement effective strategies and interventions to reduce risk factors and diseases.

**PHS 703 Designing Research Studies for Minorities and Special Populations** (3 Hours) This course examines unique health problems and concerns among African Americans, rural populations, women, children, other minorities and special populations. It describes basic study designs and their strengths and limitations, and addresses specific cultural competencies, research codes of ethics, and health disparities. It also addresses strategies for designing studies and interventions involving lay community leaders, faith-based organizations, and innovative means to reach special communities.

**PHS 704 Survey and Qualitative Research Methods** (3 Hours) This course explores descriptive research methods and emphasizes the importance of using a mixed approach of qualitative and quantitative techniques. Students are provided with an overview of survey research methodology. Questionnaire and interview design, scale construction, methods of administration, response rate, reliability measurements, scale construction and validity are discussed. Also, specific qualitative methods and techniques such as participant observation, interviewing, focus groups, and use of personal documents and records are discussed.

**PHS 705 Advocacy and Public Health Policies** (3 Hours) This course introduces advocacy and support measures for the promotion and formation of new legislation and the establishment of public health policies. Important federal, state, and international legislation is analyzed. The course also addresses the trends and processes by which public health programs are established in the United States and around the world.

**PHS 706 Principles of Environmental and Occupational Health** (3 Hours) This course addresses comprehensive public health functions of environmental health issues, evaluation and control of occupational disease hazards, effects of pollutants on human health and ecological balances; and future legislative directions for environmental policy. Topics addressed include environmental health exposures science, environmental health policy (aspects of justice, social, economic, and ethical issues), chemical and physical agents through air, food, water and workplace environment, and behavioral modifications to prevent exposures and promote public health.

**PHS 711-712-713 Advanced Biostatistics Lab I, II, and III** (1 Hour per lab course) These laboratory courses accompany the Advanced Biostatistics and Computer Applications courses. The computer laboratory courses provide practical experience with the computer software programs discussed in the class. The biostatistics course (PHS 701) and Lab I must be taken at the same time. Lab II and Lab III are taken during the following semesters. Each lab course is a one-hour credit.

**PHS 750 Community Research Practicum** (1-3 Hours) This is a supervised community experience where students participate in a community-oriented service or practice to gain first-hand knowledge of community issues and decision-making processes. In the context of this experience, the student begins developing a research agenda that should be relevant to community needs and/or practices. Students are required to register for the 1-credit hour practicum during the second semester and maintain enrollment each semester for three consecutive semesters, with the third semester culminating as the capstone experience. A final paper of publishable quality is required for completion of the course and registering for the dissertation.

**PHS 755 Independent Study** (Variable Hours) This is an individually directed study in a specific concentration in public health selected by the student and approved by the professor.

**PHS 756 Special Topics in Public Health** (1-2 Hours) This course enables students to pursue a topic or project of their choice in Public Health, such as health disparities, prevalent illnesses in Mississippi and the US, e.g., diabetes and obesity, HIV/AIDS, cardiovascular ailments, and stroke; international health systems; interventional studies in public health; and tropical diseases, e.g., leprosy, onchocerciasis, trypanosomiasis, malaria, and yellow fever. The course provides Dr.PH student's additional research methods training and skills in their public health concentration. Consent of the program executive director required.

**PHS 798 Dissertation** (3-15 Hours) Students will complete doctoral level research that demonstrates the ability to conduct a rigorous project within a specific concentration. The research topic, approved by the dissertation committee, should reflect the candidate's interest in a problem unique to public health. The completion of a minimum of 45 semester credit hours is required before enrolling in this course. Enrollment must be continuous until the research experience culminates in the successful defense of the dissertation. Prerequisite: Consent of the Chair of the Dissertation Committee each semester of enrollment.

#### *Behavioral Health Promotion and Education Concentration*

**PHBS 711 Advanced Theories and Scientific Principles for Health Promotion and Education** (3 Hours) The course provides an extensive overview of current theories and models of health promotion and education. In addition, it reviews the scientific evidence and principles supporting the foundation of health promotion and educational programs.

**PHBS 712/EPI 711 Behavioral and Psychosocial Epidemiology** (3 Hours) This course provides an overview of social, personality, and cultural factors influencing behavior. It also addresses stress and related psychosocial factors as determinants of health and disease. Psychosocial and behavior models are also discussed. Doctoral students are required to analyze a specific data set and prepare a research literature report on a specific topic in behavioral and psychosocial epidemiology. A prerequisite for the master's students is PHS 505 Principles of Epidemiology. Prerequisite for doctoral students is PHS 702 Disease Pathogenesis and Behavioral Risk Factors.

**PHBS 713 Qualitative Research Methods** (3 Hours) This course examines major qualitative approaches that are most frequently applied to the study of process in human service settings. Students learn how to conduct systematic investigations of in- depth, non-quantitative studies of individuals, groups, organizations, or communities.

**PHBS 714/EPI 712 Clinical Trial and Interventional Study Designs** (3 Hours) This course reviews in greater detail the design, conduct, and evaluation of clinical trials and cohort studies. In addition it addresses errors and common methodological pitfalls using practical illustrations. The first half of the course addresses clinical trials and the second half focuses on other interventional study designs. Prerequisites include PHS 521 Epidemiological Study Designs and PHS 703 Designing Research Studies on Minorities and Special Populations.

**PHBS 715 Research Seminar in Health Promotion** (3 Hours) This course exposes graduates to current research methods and practice in health promotion.

**PHBS 716 Social and Cognitive Bases of Behavior** (3 Hours) This course addresses the theories and research on attitude formation and change, attributional styles, prejudice, interpersonal perception, group dynamics, self-regulation, and cognitive styles.

**PHBS 717 Database Management Systems** (3 Hours) This

is an introduction to database concepts including data independence, relations, logical and physical organizations, schema, and subschema. Hierarchical, network, and relational models, with description of logical and physical data structure representation of the database system are discussed. Finally, normalization: first, second, and third normal forms of data relation and relational algebra, relational calculus, data structure for establishing relations, and query functions are addressed.

**PHBS 718 Clinical Trials and Intervention Study Designs** (3 Hours) This is an in- depth course on the design, conduct, and evaluation of clinical trials and cohort studies. In addition, it addresses systemic errors and common pitfalls using practical illustrations from various sources. The first half of the course addresses clinical trials and the second half focuses on other interventional study designs. Prerequisites include PHS 521 Epidemiological Study Designs and PHS Designing Research Studies in Minorities and Special Populations.

**PHBS 719 Clinical Practices with Urban Poor and Undeserved Populations** (3 Hours) This course examines a range of modalities used in working with urban poor populations, including the use of empowerment strategies with women of color and victims of urban violence, use of group work models with parenting teens, and the diagnosis and treatment of Posttraumatic Stress Disorders (PTSDs). Theoretical models and social work strategies that have been applied in urban settings are critically analyzed.

#### *Epidemiology Concentration*

**PHEP 711 Behavioral and Psychosocial Epidemiology** (3 Hours) This course provides an overview of social, personality, and cultural factors influencing behavior. It also addresses stress and related psychosocial factors as determinants of health and disease. Psychosocial and behavior models are discussed. Doctoral students will be required to analyze a specific data set and prepare a research literature report on a specific topic in behavioral and psychosocial epidemiology. A prerequisite for the master's students is PHS 505 Principles of Epidemiology. Prerequisites for doctoral students include PHS 505 and PHS 702 Disease Pathogenesis and Behavioral Risk factors.

**PHBI 711 Categorical Data Analysis** (3 Hours) This course provides an in-depth review of the appropriate biostatistical techniques for analyzing categorical data. Included will be chi-square statistics, log-linear analysis, and logistic regression. SPSS and/or SAS statistical software packages will be utilized. Prerequisites: PHS 503 Introduction to Biostatistics and Computer Applications, PHS 701 Advanced Biostatistics and Computer Applications, and a multiple regression analysis course.

**PHEP 712 Clinical Trial and Interventional Study Designs** (3 Hours) This course provides an in-depth review of the design, conduct, and evaluation of clinical trials and cohort studies. In addition it addresses errors and common methodological pitfalls using practical illustrations. The first half of the course addresses clinical trials and the second half focuses on other interventional study designs. Prerequisites include PHS 521 Epidemiological Study Designs and PHS 703 Designing Research Studies on Minorities and Special Populations.

**PHEP 713 Infectious Disease Epidemiology** (3 Hours) This course reviews infectious agents of public health importance. Included are vaccine-preventable infectious diseases; diseases spread by personal contact, water, and food; and arthropod-borne diseases and nosocomial infections. In addition, the emergency preparedness system will be discussed and agents involved in bioterrorism will be

addressed regarding treatment and (PHS 702) prevention. Prerequisites are PHS 505 Principles of Epidemiology, and Disease Pathogenesis and Behavioral Risk Factors.

**PHEP 714 Nutrition and Genetic Epidemiology** (3 Hours) This first half of the course addresses nutritional factors and their relationship to disease. The second half involves a review of genetics, inheritance, and molecular factors causing disease. Prerequisites are PHS 505 Principles of Epidemiology, and PHS 702 Disease Pathogenesis and Behavioral Risk Factors.

**PHEP 715 Applied Multivariate Analysis** (3 Hours) This course offers doctoral students a thorough analysis of the theory and applications of multivariate methods. Topics to be covered include matrix algebra, factor analysis, canonical correlation, discriminant function analysis and multivariate analysis of variance.

**PHEP 716 Epidemiology and Toxicology for Public Managers** (3 Hours) This course introduces and teaches the concepts, theories, facts, and principles of the study, prevention and treatment of disease and poisons. The course includes conducting an epidemiological study.

**PHBI 712 Multivariate Method I** (3 Hours) This course covers multivariate analysis of variance and covariance, canonical correlation, factor analysis, discriminant function analysis, and selected advanced topics.

**PHBI 713 Multivariate Methods II** (3 Hours) Structural-equation models, log-linear models, and selected advanced topics based on student needs and interests.

**PHEP 717 Environmental Epidemiology** (3 Hours) This course is designed to provide students with the basic knowledge and skills required to develop and apply epidemiologic principles and concepts to the study of adverse effects of various environmental factors on both human and ecological health. Emphasis is put on the study of the health effects of physical, chemical and biological factors in the external environment, broadly conceived from the epidemiological point of view. As such, it enables students to interpret epidemiological data and understand the approaches used in epidemiological investigations of acute and chronic diseases. The course also covers the basic methods and issues involved in epidemiologic investigations of disease conditions in human populations

#### *Health Policy and Management Concentration*

**PHPM 711 Strategic Leadership in Management of Human Resources** (3 Hours) This course provides theoretical and practical knowledge for managing the human resources of public health organizations. Topics include cultural and psychological factors affecting recruitment, selection, placement, and promotion; training and development processes; performance appraisal methodologies; and job evaluation methods and compensation practices. Factors promoting employee productivity and job satisfaction are explored. Legal concerns, including the requirements for the validation of selection tools, are covered.

**PHPM 712 Public Health Economics** (3 Hours) This course examines factors determining the supply and demand for healthcare services. Markets for professional services, drugs, and insurance are discussed. Competitive effects on efficiency, effectiveness, and access are examined. The class discusses relevant theories of production, cost curves, market structure, and factor price determination.

**PHPM 713 Analysis of Health Legislation and Regulations** (3 Hours) This course identifies and analyses legislation and regulations that determine and/or influence healthcare access, delivery and practice. It focuses on the

factors that influence policy formulation and implementation. Students are expected to analyze laws and regulations affecting the health of populations at risk for major health problems. Examples of current issues covered are Medicaid, Medicare, HIV/AIDS, family planning, and cardiovascular disease.

**PHPM 714 Evaluation of Performance and Quality in Health Service Organizations** (3 Hours) This course provides an overview of theories and designs used for measurement and evaluation of the performance of healthcare organizations. Emphasis is given to the importance of quality as a measure of performance. Strategies to insure continuous performance improvement and excellence in delivery of services are explored.

**PHPM 715 Decision Modeling** (3 Hours) This course describes the application of the techniques of analytical modeling to managerial decisions. The course offers a study of data collection, presentation, and analysis including Bayesian inference, decision matrices, and decision trees.

**PHPM 716 Administration of Integrated Health and Hospital Systems** (3 Hours) The course focuses on the complex and essential interrelationships that exist within and among healthcare entities. This course will 1) identify and study components of the healthcare system (hospitals, clinics, home care agencies, hospice care, emergency medical services, etc.) as well as the interrelationships necessary for their survival. 2) It will explore the variety of arrangements (networks, systems, alliances, etc.) used for integrating and managing these entities. This course will also illustrate the fact that survival within the healthcare industry is largely predicated upon an entity's ability to partner with other healthcare providers.

**PHPM 717 Managed Care Networks and Public Health** (3 Hours) This course introduces the dynamic impact of managed care on the delivery of healthcare services and the cost containment features of health plans that thrived in the 1990s. The student will become familiar with all aspects of managed care (HMOs, PPOs, and POS) from effectiveness including of these healthcare plans medical/loss ratios, profit margins and outcomes measurements to their effects on access to quality of healthcare services.

**PHPM 720 Management of Information Systems** (3 Hours) This course familiarizes students with quantitative approaches that can be used to solve problems in public sector management.

**PHPM 723 Financial Management in Public Organizations** (3 Hours) The management of organizational resources is the focus of this course. While local governments will be highlighted, the principles and techniques have applications to all public and quasi-public organizations

**PHPM 724 Seminar in Strategic Management** (3 Hours) This course offers special topics dealing with important issues in strategic management. The course emphasizes global and technological perspectives of strategic management issues.

**PHPM 725 Seminar in Organizational Change** (3 Hours) This course focuses on the human aspects of problems arising in technical, social, and organizational arenas faced with the need to change. The course includes detailed analyses of organizations as systems, organizational leadership and change.

**PHPM 726 Seminar in Organizational Strategy and Decision Making** (3 Hours) This course offers an overview of the theory and research in strategic management with a scholarly research orientation on issues of both strategic

content and process. The empirical study of these issues is emphasized.

**PHPM 727 Policy and Practice Issues in Family and Children's Services** (3 Hours) This seminar is designed to provide students with an opportunity to explore policies, programs, services, and related practice issues affecting families and children. It focuses on the nature of selected policies, the policy-making process, factors that influence policy formulation, implementation, and evaluation and approaches to policy analysis. Particular emphasis is placed on the critical examination of selected policy and practice issues related to families and children. Students are expected to prepare a major analytical policy or practice issue paper. Examples of current issues covered are the impact of welfare reform, Medicaid coverage, managed care, homelessness, permanency planning for children at risk, and research on the prevention of family and /or youth violence.

**PHPM 728 International Health Policy and Practice Issues in Social Welfare** (3 Hours) This course examines international health policy issues and trends and their implications for access to healthcare at the international level. It explores issues of accessibility, affordability, attitudes and belief systems, and indigenous governmental and non- governmental organizations. The course provides a seminar setting for conceptualization and organization of theoretical concepts and constructs related to healthcare policy and service delivery paradigms with implications for practical utilization.

## COLLEGE OF PUBLIC SERVICE

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### School of Policy and Planning

- ❶ Public Policy and Administration
- ❶ Urban and Regional Planning

### School of Social Work

- ❶ Doctoral Program in Social Work
- ❶ Master's Program in Social Work

### Mission

The mission of the College of Public Service is to educate a diversity of students for the highest quality professional service in collaboration with the public and private sectors, and to develop local, national, and international leaders in the professional academic disciplines in the Schools of Policy and Planning, and Social Work.

### Goal

The primary goal of the College is to provide undergraduate and graduate education to students and promote the development of intellectual leaders in the identification, conceptualization, and dissemination of knowledge related to services in the three professions.

## SCHOOL OF POLICY AND PLANNING

Dr. Johnny Gilleylen, Associate Professor,  
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### Programs

- ❶ Public Policy and Administration
- ❶ Urban and Regional Planning

The School of Policy and Planning is made up of Public Policy and Administration, Urban and Regional Planning, and the Urban Studies Program. The School offers an undergraduate degree in Urban Studies, and master's degrees in Public Policy and Administration and Urban and Regional Planning. Doctorate degrees are offered in Public Administration and Urban and Regional Planning.

The School of Policy and Planning seeks to provide a vibrant, thriving learning environment for students, faculty and staff. The School seeks to address the growing complexity of urban problems in a supportive,

interdisciplinary manner. All programs within the School are dedicated to and passionate about enhancing each individual so that he or she is:

1. Receptive to the world through the sharpening of senses;
2. Comprehending of the world through the exercise of intelligence;
3. Creatively envisioning other worlds through imagination;
4. Effective in the world through practice of skills;
5. Supportive of sensitive responses to problems of the environment.

The School introduces a sense of the relationship of communities and built form to culture, policy, and management, through the examination of theory, practice, prototypes, patterns, and precedents.

We believe in a learning process that is integrated, meaningful and implemented in a continuous-progress manner where all learners are successful. The learning is designed to accommodate each person's needs, unique gifts and style of learning while ensuring the common core of student learning.

We believe in learning that strikes a balance between comprehensive understanding and specialization, between theory and practice, and between academic inquiry and professional pragmatism. An innovative attitude toward the future of planning and design is emphasized and is explored through the classroom, group projects and field studies.

We believe each individual accepts responsibility for realizing his or her full potential and constantly works towards enhancing the capacity of others.

We realize the value of our individual role and service but also believe we are part of something larger than our School.

## PUBLIC POLICY AND ADMINISTRATION PROGRAMS

Dr. Johnny J. Gilleylen, Sr., Associate Professor and Chair

101 West Capital Street, Jackson, MS 39201

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E-mail: ppa@jsums.edu

### Faculty

Dr. G. Billingsley, Associate Professor

Dr. J. Gilleylen, Associate Professor  
Dr. B. Odunsi, Professor  
Dr. C. Robinson, Associate Professor  
Dr. J. Ko, Associate Professor  
Dr. A. Hines, Assistant Professor

This program offers a Master of Public Policy and Administration (MPPA) degree and a Doctor of Philosophy (Ph.D.) in Public Administration.

#### **Accreditation**

The programs within the Department of Public Policy and Administration are accredited and rostered by the National Association of Public Affairs and Administration (NASPPA).

#### **Educational Philosophy**

The effort to allocate resources and the administration of the allocation of resources is as old as the history of humankind residing communally. However, the academic discipline of American Public Administration is a comparatively new discipline, tracing its beginning to the late 1800's. From that time period to the present, the discipline of Public Administration has been linked, perhaps more than many others, to the ideological foundations of the American intergovernmental system. The major focus of any public administration program of quality has, and continues to be on the administration of resources with equity. Indeed, the public servant then becomes the noblest of all professions, practicing the noblest art. The nobility of public service and the underpinnings of the concepts of equity and the allocation of resources with equity is the ethos which drives the philosophy of learning in the Public Policy and Administration Programs at Jackson State. It is this philosophy which we seek to engender in the PPA student. The Program of Public Policy and Administration is the historical principal unit at Jackson State University which educates persons primarily for careers in the fields of public management and policy analysis and for service in public, non-profit, and "quasi" public organizations. Concomitantly, it is also the mission of the Program of Public Policy and Administration to serve as a resource to the Jackson State University community, the Jackson metropolitan area, the State of Mississippi, the Nation, and developing areas throughout the World.

The Program of Public Policy and Administration seeks to prepare students for significant professional managerial and leadership positions. The curriculum is designed to equip students with the skills of contemporary public management, provide a broad understanding of the role of administration in the decision-making process, and provide a sound foundation in ethics.

### **The Master of Public Policy and Administration Degree (MPPA)**

#### **Mission**

The mission of the MPPA Program are:

1. To provide a cadre of highly trained individuals who are committed to the notion of public service in a variety of organizational settings;
2. To develop advanced educational opportunities for students of public administration in an urban environment where a multiplicity of governmental opportunities, interactions and practices are observed; and
3. To fill the need for public, high-level executive management which exists in this state and the nation, particularly as this need relates to minorities and women.
4. To serve as a resource to the greater community.

#### **Program Objective**

The Master of Public Policy and Administration degree is designed to prepare students for significant professional and managerial positions primarily in public agencies, governmental departments, and non-profit and other administrative entities.

#### **Admission Requirements**

Students wishing to enter the Program must have a B.A. or B.S. from an accredited college or university. Program applicants should take the G.R.E. or G.M.A.T., submit three letters of recommendation (at least two academic references), academic transcripts, an MPPA application, and a University application. Students must have a 3.0 cumulative GPA for an unconditional admission. The Department may require an oral and/or written interview.

#### **Alternative Admission Track**

The Program of Public Policy and Administration has developed an "alternative admission track" for the MPPA degree program for students who do not meet the general admission requirement. The track establishes other criteria for gaining entry into the program.

1. The applicant must have graduated at least three years prior to admission.
2. The applicant must have a full-time employment history of at least three years.
3. The applicant must provide a rationale in writing, as a part of the career goals essay, which demonstrates to the Admission Committee that the applicant's prior history in academia is not indicative of their graduate potential.
4. The applicant must enroll in nine hours of MPPA core/concentration courses, three enhancement hours and obtain a 3.00 G.P.A. in the first semester of enrollment.
5. The applicant must attend a personal interview if requested by the Admission's Committee.

#### **Program Curriculum**

Students must maintain an overall 3.0 average in PPA course (4.0 scale) and successfully complete the following in order to earn the Master of Public Policy and Administration degree:

**Thesis Option: 39 hours**

1. Complete 18 hours of required courses.
2. Complete 12 hours of coursework in one of eight areas of general public administration
3. Take at least one (1) three- (3) hour course elective.
4. Complete 3-6 hours of internship or additional coursework if the student is in-service.
5. Take and pass a comprehensive examination. (*Given Spring and Fall only*)
6. Write and defend a thesis orally (3-6 hours).

**Non-Thesis Option: 45 hours**

1. Complete 18 hours of required courses.
2. Complete 12 hours of coursework in one of eight (8) specialized areas of general public administration.
3. Take as least one (1) three-(3) hour course elective.
4. Complete six (6) hours of internship or additional coursework if in services.
5. Take and pass a comprehensive examination. (*Given Spring and Fall only*)
6. Take six (6) additional hours (3 hours in a skill-based or research methods course and 3 hours in the area of specialization).

**Specializations:** Students have the opportunity to pursue the following program specializations:

- Public Finance
- Health Care Administration
- Community and Economic Development
- Judicial Administration
- Human Resource Management
- General Management
- State and Local Government
- Environmental Management, Planning & Policy

Students who enter the program without an understanding of the American Intergovernmental System, Research Methodology or Computer Applications to Management will have to take compensatory coursework which may not count towards the degree.

**Only students admitted to a degree program may enroll in the Core Courses without prior approval.**

**Core Courses**

Course	Title	Hours
PPAD 505	Principles of Public Administration	3
PPAD 548	Public Personnel Administration	3
PPAD 549	Public Finance Administration	3
PPAD 551	Public Policy	3
PPAD 576	Administrative Theory	3
PPAD 596	Research for Public Management	3
	Total Hours	18

For additional information and requirements, please see the Policy and Procedures Manual.

**Curriculum Plans**

**1. General Management: Thesis Option  
Full Time Plan: Two Years with Summer**

**First Year-Fall Semester**

PPAD 505	Principles of Public Administration	3
PPAD 551	Public Policy	3
PPAD 596	Research for Public Management	3
		9

**Spring Semester**

PPAD 548	Public Personnel Administration	3
PPAD 549	Public Finance	3
	Concentration Course	3
		9

**Graduate Summer Session**

	Concentration Course	3
		3

**Second Year-Fall Semester**

PPAD 576	Administrative Theory	3
	Concentration Course	3
	Concentration, Internship or Elective	3
		9

**Spring Semester**

PPAD 598	Thesis	3
	Concentration, Internship or Elective	3
		6
	<i>Total Hours</i>	39

**2. General Management: Non-Thesis Option  
Full Time Plan: Two Years with Summers**

**First Year-Fall Semester**

PPAD 505	Principles of Public Administration	3
PPAD 551	Public Policy	3
PPAD 596	Research for Public Management	3
		9

**Spring Semester**

PPAD 548	Public Personnel Administration	3
PPAD 549	Public Finance	3
	Concentration Course	3
		9

**Graduate Summer Session**

PPAD 707	Management of Information Systems	3
	Concentration, Internship or Elective	3
		6

**Second Year-Fall Semester**

PPAD 549	Public Finance	3
PPAD 576	Administrative Theory	3
	Concentration, Internship or Elective	3
		9

**Spring Semester**

PPAD 597	Internship	3
	Advanced Concentration Elective	3
	Concentration or Elective	3
		9

**Graduate Summer Session**

	Concentration, Internship or Elective	3
		3

*Total Hours* 45

**3. General Management: Thesis Option  
Part Time Plan: Three Years with Summers**

<b>Core</b>	
<b>First Year-Fall Semester</b>	
PPAD 505 Principles of Public Administration	3
PPAD 596 Research for Public Management	<u>3</u>
	6
<b>Spring Semester</b>	
PPAD 548 Public Personnel Administration	3
PPAD 551 Public Policy	<u>3</u>
	6
<b>Graduate Summer Session</b>	
PPAD 597 Internship	3
Concentration Course	<u>3</u>
	6
<b>Second Year-Fall Semester</b>	
PPAD 549 Public Finance	3
PPAD 576 Administrative Theory	<u>3</u>
	6
<b>Concentration</b>	
<b>Spring Semester</b>	
PPAD 509 Seminar in Executive Leadership Development	3
Concentration Course	<u>3</u>
	6
<b>Graduate Summer Session</b>	
PPAD 521 Black Perspectives in Public Administration	<u>3</u>
	3
<b>Third Year- Fall Semester</b>	
PPAD 549 Thesis	<u>3</u>
	3
<b>Spring Semester</b>	
PPAD 549 Thesis	<u>3</u>
	<u>3</u>
<i>Total Hours</i>	39

**4. General Management: Non-Thesis Option  
Part Time Plan: Three Years with Summers**

<b>Core</b>	
<b>First Year-Fall Semester</b>	
PPAD 505 Principles of Public Administration	3
PPAD 596 Research for Public Management	<u>3</u>
	6
<b>Spring Semester</b>	
PPAD 548 Public Personnel Administration	3
PPAD 551 Public Policy	<u>3</u>
	6
<b>Concentration</b>	
<b>Graduate Summer Session</b>	
PPAD 525 Urban Politics and Policymaking	3
PPAD 597 Internship	<u>3</u>
	6
<b>Second Year-Fall Semester</b>	
PPAD 549 Public Finance	3
PPAD 576 Administrative Theory	<u>3</u>
	6
<b>Spring Semester</b>	
PPAD 509 Seminar in Executive Leadership Development	3

PPAD 770 Administration of Non-Profit Agencies	<u>3</u>
	6

<b>Graduate Summer Session</b>	
Elective	<u>3</u>
	3

<b>Third Year- Fall Semester</b>	
PPAD 521 Black Perspectives in Public Administration	3
PPAD 597 Internship	<u>3</u>
	6

<b>Spring Semester</b>	
PPAD 707 Management of Information Systems	3
Advanced Elective	<u>3</u>
	<u>6</u>
<i>Total Hours</i>	45

**Doctor of Philosophy  
in Public Administration**

In 1992 Jackson State University commenced offering the Doctor of Philosophy Degree in Public Policy and Administration. The program requires a minimum of 60 semester hours of course work beyond the master's degree. This 60 hours includes the dissertation.

**Mission of Program**

The Ph.D. program has an urban management as well other areas of concentrations. Students are required to master a body of knowledge that centers around the public management aspects of urban problems; urban minorities; urban development (both past and present); and analysis of social systems. The program is designed to prepare persons for careers in executive management, teaching, research, and other positions of public and/or non-profit responsibility. Concomitantly, this degree program emphasizes the acquisition of a knowledge base in the discipline of Public Administration with an emphasis on policy making, planning, analysis, evaluation and program implementation. In addition to the urban concentration, students will select a concentration in program management, policy analysis and/or environmental management, planning and policy. This degree is especially appropriate for persons in public, non-profit and "quasi-public" management settings.

**Admission Requirements**

The Doctor of Philosophy in Public Policy and Administration Degree is one which demands sound conceptual and analytical abilities. A solid educational foundation and substantial academic and professional achievement are among the criteria upon which applications for admission are evaluated.

Specific prerequisites for admission include the followings:

1. A graduate-level degree from an accredited institution with a grade point average of 3.5 as evidenced by an official transcript.
2. GRE (verbal and quantitative), MAT or GMAT.



3. Three letters of recommendation, two from academic sources.
4. A career goals essay.
5. Two samples of academic and professional writing.
6. For international students, a satisfactory score on the TOEFL or IELTS as determined by the Graduate School.
7. Other considerations such as work or life experiences which are directly related to potential successful completion of the program may also be factored into the admission review.
8. Interview.

**Admissions to the Ph.D. Program are granted once per annum for the Fall Semester.**

#### Alternative Ph.D. Admissions Tracks

The Admissions Committee reviews candidates' admission applications along with: GPA, letters of recommendation, writing sample, statement of professional goals, test scores, (GRE, GMAT or MAT) and work experience. Should a candidate fall below the 3.5 minimum GPA, three alternative admissions tracks are possible. Regardless of the track employed, each applicant must meet acceptable standards as reviewed by the Admissions Committee.

1. GPA 3.4 - 3.49 and one of the following:
  - A) Test Scores (GRE, GMAT or MAT)
  - B) Excellent writing sample
  - C) Excellent work experience
2. GPA 3.1 - 3.39 along with **A and B below**:
  - A) two of the following:
    - ① Test Scores (GRE, GMAT or MAT)
    - ① Excellent writing sample
    - ① Excellent work experience
  - B) An oral and/or written competency examination.
3. GPA 3.0 - 3.09 and all of the following:
  - A) Excellent writing sample
  - B) Public and private sector management experience in excess of 10 years
  - C) An oral and/or written competency examination
  - D) Test Scores (GRE, GMAT or MAT).

For the writing sample, excellence assessment is defined by a committee's assessment that the sample would be awarded a minimum of a B+ in a first-year Ph.D. course.

Excellent work experience is defined as a combination of duration in position and rank. Excellence is awarded to any combination of the following:

- ① Four (4) or more years of (4 year-college) teaching experience in a management field at the instructor level or above and performance evaluations of excellent.
- ① Four (4) or more years as senior executive (CEO, COO, VP, Facility Manager, or Department

Head) of an organization employing 10 or more FTEs or which requires executive level skills such as fiscal and human resource management.

- ① Eight (8) or more years of public sector employment in mid-level or higher positions.

The committee may consider combinations of the above.

**Oral and/or written interviews are required for admission to the doctoral program.**

#### Deficiencies

Students who matriculate successfully in the Ph.D. Program in Public Policy and Administration must demonstrate a knowledge base of the American intergovernmental system, research methodology and computer applications, and fiscal resource and budgeting administration. Persons entering the program from academic disciplines without these subjects will be administered preliminary exams or other evaluative methods to determine the need for compensatory work. Compensatory work will not be counted toward the major program of students.

#### Degree Requirements

A minimum of 48 semester hours above the Master's degree, plus 12 hours in dissertation credits, is required to complete coursework for the Ph.D. in Public Administration. The 48 semester hours are divided as follows:

- ① 24 hours of public administration core courses
- ① 12 hours of urban management concentration courses
- ① 12 hours of elective concentration courses
- ① 12 hours of dissertation (which may be counted toward the degree)

**Areas of concentration are:** Policy Analysis, Program Management, Urban Management, Environmental Management, and Planning and Policy.

#### Public Administration Core

#### Required Courses

Course	Title	Hours
PPAD 705	Scope of Public Administration	3
PPAD 707	Management of Information Systems	3
PPAD 748	Human Resources Planning and Management	3
PPAD 760	Financial Management in Public Organizations	3
PPAD 776	Theories of Public Organizations	3
PPAD 777	Public Policy Formulation and Implementation	3

PPAD 796-90	Advanced Research Methods for Public Management I	3
PPAD 796-91	Advanced Research Methods for Public Management II	3
	<i>Total Hours</i>	24

**Urban Management Core (12 Hours)**

PPAD 712	Intergovernmental Relations	3
PPAD 738	Community Political Processes	3
PPAD 780	Administrative Law	3
PPAD 782	City Planning and Political Process	3
PPAD 786	Urban Problems, Non-Traditional Options & Techniques	3
*PPAD 585/785	Seminar in Urban Problems	3
PPAD 712	Urban Management and Urban Services	3
PPAD 725	Urban Politics and Policy Making	3
PS 537	Urban, Social Change and Political Power	3
SOC 620	Community Analysis	3

**Elective Concentrations**

(Select 12 hours from the courses listed under one of the following concentrations)

**Program Management**

PPAD 700	Health Care Finance	3
PPAD 704	Administration of Ambulatory Health Care Systems	3
PPAD 708	Contemporary Topics in Public Administration	3
*PPAD 709	Seminar in Executive Leadership Development	3
PPAD 736	Administration of Health Agencies	3
PPAD 749	Human Resource Programs in Public Agencies	3
PPAD 750	State and Local Government Budgeting and Finance	3
PPAD 762	Comparative Public Administration	3
PPAD 770	Administration of Non-Profit Organizations	3
PPAD 781	Seminar in Community and Economic Development	3
*PPAD 782	Seminar in Program Development and Evaluation	3
FNGB 511	Computer Applications in Management	3

**Policy Analysis**

PPAD 706	Quantitative Methods	3
PPAD 708	Contemporary Topics in Public Administration	3
PPAD 709	Seminar in Executive Leadership Development	3
*PPAD 710	Advanced Quantitative and Qualitative Research	3
*PPAD 759	Seminar in Public Policy Analysis	3
*PPAD 782	Seminar in Program Development and Evaluation	3

xxx “New Courses” 3

**Environmental Management, Planning and Policy**

PPAD 757	Environmental Law	3
*PPAD 760	Seminar in Politics of Environmental Administration	3
PPAD 761	Governmental Regulation of Natural Resources	3
*PPAD 709	Seminar in Executive Leadership	3
PPAD 781	Seminar in Community and Economic Development (strongly suggested)	3
PPAD 710	Toxicology and Epidemiology for Public Managers	3
ECON 700	Environmental Economics	3
BIO 501	Environmental Science (strongly suggested)	3
BIO 514	Methods of Environmental Analysis	3
UA 533	Rural Land Use and Planning	3
UA 539	Risk Analysis	3
ITHM 529	Environmental Toxicology and Risk Assessment	3

**Other Courses**

PPAD 797	Internship
PPAD 798	Dissertation
PPAD 799	Independent Study

\*Required Course: Must take as least six hours in concentration prior to enrolling in seminar course, unless granted an exemption.

**Qualifying Exam**

A qualifying exam must be taken by students at the completion of 18-21 hours of course work in selected courses (see Policy and Procedure Manual). This examination will determine the feasibility of a student continuing pursuit of the doctoral degree in Public Policy and Administration.

**Students who do not pass the qualifying exam will be asked to exit the program.**

**Comprehensive Exam**

A Comprehensive Exam will be administered by the Graduate Faculty. The student is expected to use the examination to creatively demonstrate his/her ability to integrate effectively the various fields of study and apply them to his/her own professional area. The Comprehensive Examination will be administered upon completion of course work and before the submission of a dissertation proposal.

**Dissertation and Defense**

To be awarded the Doctor of Philosophy in Public Administration degree, the candidate will be required to present and have approved a dissertation on a pertinent research problem in his/her area of concentration, and pass an oral examination in defense of the research. The student's plan for independent research will be developed with the assistance and active participation of the student's dissertation

committee. The dissertation must demonstrate the student's competency in scholarly research.

### Graduation Requirements

1. Completion of 48 hours of course work.
2. Passage of the qualifying examination.  
(Given Fall, Spring and Summer)
3. Passage of the comprehensive examination.  
(Given Fall and Spring only)
4. Maintenance of a GPA of not lower than 3.0 with no more than two grades of C.
5. Completion and Defense of the Dissertation Proposal and Dissertation.

### Sample Matriculation Schedule of a Typical Ph.D. Student

#### Semester I

- PPAD 705 Scope of Public Administration (C)  
PPAD 760 Financial Management in Public  
Organizations  
PPAD 796 Advanced Research Methods I. (C)

#### Semester II

- PPAD 777 Public Policy Formulation and  
Implementation (C)  
PPAD 796-91 Adv. Research for Public Man. II (C)  
PPAD 776-90 Theories of Management in Public  
Organizations (C)

#### Semester III

- PPAD 707 Management of Information Systems  
(C) Qualifying Examination to be taken

#### Semester IV

Submission of the Plan of Study

#### Semester V and VI

In subsequent semesters, the typical student will complete the Urban Core and Elective Concentration. Student must sit for the Comprehensive examination at the conclusion of all coursework.

#### Semester VII to X

Upon successful passage of the Comprehensive examination the Dissertation is initiated. After the Dissertation is written and successfully completed, the student graduates.

### DESCRIPTION OF SELECTED COURSES

Notes: Courses offered outside the department may be taken with prior approval. For additional courses, please see Policy and Procedure Manual.

**PPAD 504/704 Administration of Ambulatory Care Systems.** (3 Hours) An analysis of primary health care as delivered in the United States and other countries. Various models of delivery are examined, e.g. via physician's office, Neighborhood Health Center, Health Maintenance Organization, etc.

**PPAD 505 Principles of Public Administration.** (3 Hours) An analysis of the basic principles and practices of Public Administration in the United States. Problems of structure, organization, administrative power, status

and leadership are examined. Major actors in the struggle to control bureaucracy are identified. Value systems, ethics and application of administrative power are explored.

**PPAD 507 Quantitative Analysis.** (3 Hours) Students are familiarized with the application of relevant research techniques to the problems of public sector management and policy formulations. Required for entering students without research or computer skills.

**PPAD 508/710 Advanced Quantitative/ Qualitative Analysis.** (3 Hours) Prerequisite: Research for Public Management or Advanced Research I. This course gives the students a higher level of skills in research methodology.

**PPAD 509/709 Seminar in Executive Leadership.** (3 Hours) Leadership is an area of academic inquiry and skill development from historical, behavioral, political, and administrative perspectives. Additionally, students engage in research and projects which will develop their skills as executive leaders.

**PPAD 513/713 Intergovernmental Relations.** (3 Hours) Evolution of the American federal system; consideration of inter-unit cooperation and conflict; review of administrative issues like revenue-sharing, federal grants and regulations.

**PPAD 514/714 Problems of County Administration.** (3 Hours) Prerequisite: State and Local Government. Administrative operations in county government are discussed; emphasis is placed on understanding purchasing and contracting, personnel and financial administration, reporting and public relations.

**PPAD 515 Metropolitan Government and Politics.** (3 Hours) Prerequisite: American Government. Political and structural elements of public and private influences on policies like annexation, consolidation, regional development and planning are analyzed.

**PPAD 516/716 The Administrative State.** (3 Hours). Political environment of public administration; relation of bureaucracies to public opinion and political pressure; relations among legislators, elected executives, and civil servants are discussed.

**PPAD/PS 517 Seminar in Mississippi Government and Politics.** (3 Hours) Special features of Mississippi governmental structure and political process are reviewed.

**PPAD 518/718 Seminar in State Politics.** (3 Hours). The examination of the organization, function, political dynamics and policy outputs of state governmental systems.

**PPAD 519/719 Problems of State Administration.** (3 Hours). Administrative operations in state government are reviewed with emphasis on planning research, purchasing and contracting, personnel and financial administration, reporting and public relations.

**PPAD 520 Civil Rights Laws and Affirmative Action.** (3 Hours) This course is designed to introduce the students to civil rights laws passed in America since the 1960s. As such this course examines the national government's response to the claims of racial/ethnic and language minorities. Every effort is made to relate changes in civil rights laws to the general nature of incremental policy making in the U.S.

**PPAD 521/721 Black Perspectives in Public Administration.** (3 Hours) Public Policy problems, perceptions and experiences of Blacks are examined along with policy process which impact the status of blacks. Broader questions concerning systemic change, structural transformation and historically built-in dilemmas are examined.

**PPAD 525/725 Urban Politics and Policies.** (3 Hours) Community power and decision-making; political leadership; the relationship of citizens of their government; the urban bureaucracy, citizen participation; and delivery of services are discussed.

**PPAD 536/736 The Administration of Health Agencies.** (3 Hours) A general overview of health care systems, especially the free enterprise system utilized in America, is discussed, including a review of empirical studies of demand for health services; behavior of providers, and relationship of health services to population health and the method in which public input into health care organizations helps form public policy.

**PPAD 550/750 State and Local Government Budgeting and Finance.** (3 Hours) Prerequisite: Public Finance or equivalent. Students study the fiscal problems of urban areas and the scope of government fiscal activities, including revenue trends, taxing policies, cash flow management, debt management and pension fund management.

**PPAD 551 Public Policy.** (3 Hours) Politics of the policy process; nature, determinants, and effects of public goods and services; formulation, implementation, and evaluation of public policies.

**PS/PPAD 553 Constitutional Law and the Economic Enterprise\*\*.** (3 Hours) Prerequisite: PS 423 Constitutional Law. Selected social and regulatory legislation and its constitutional foundations are analyzed.

**PPAD 557 Environmental Law.** (3 Hours) Federal and state regulations designed to protect the environment are reviewed.

**PPAD 558 The Correctional System.** (3 Hours) Principles of the formal behavior-control devices are examined with an emphasis on legal systems and the philosophical background of criminal justice.

**PPAD 559/759 Seminar in Public Policy Analysis.** (3 Hours) Prerequisite: Public Policy Formulation and Implementation. This course provides a general and conceptual overview of the study of public policy as a major sub-field of public administration. Emphasizes the policy process and include methods and techniques of policy analysis.

**PPAD 560 Seminar in Politics of Environmental Administration.** (3 Hours) Prerequisite: Environmental Law. The contemporary aspects of environmental problems as reflected in society, politics and business that are faced by administrators are discussed.

**PPAD 561 Governmental Regulation of National Resources.** (3 Hours) Prerequisite: Environmental Law. The legal and political problems faced by government when trying to regulate use of natural resources are examined.

**PPAD 562/762 Comparative Public Administration.** (3 Hours) Prerequisite: Comparative Government. Students analyze administrative processes and systems in various types of governments including operation of national plans, public enterprises, and rural development.

**PPAD 568 Labor Management Relations In the Public Sector** (3 Hours) Prerequisite: PS 371. The course analyzes the development of labor unions at the national, state, and local government levels in the United States. (F)

**PPAD 571/771 Program Development and Operation.** (3 Hours) Prerequisite: Governmental Organization and Administration Theory. The development, operation, and evaluation of public programs; examination of various problem solving techniques; and problems associated with new programs are discussed.

**PPAD 572 Human Relations in Public Employment.** (3 Hours) Prerequisite: American Government. The course develops understanding of human problems in public agencies; focusing on collective bargaining, contract administration, personnel efficiency and morale, equal employment and affirmative action procedures.

**PPAD 576 Administrative Theory.** (3 Hours) Organizational change, effectiveness, and allocation processes in public agencies, are discussed. The theoretical models of open system, rationalist conflict, coalition-building and decision-making are examined, with the aim of presenting a unified set of propositions about organizations.

**PPAD 579 Administrative Behavior.** (3 Hours) The course examines administrative behavior and government management with appropriate comparison to private industry; analysis of principal elements of the public administrator's job, such as planning procedures and work methods; evaluating and control programs and operations.

**PPAD 580 Administrative Law.** (3 Hours) Introduce students to series of important issues in Administrative Law. Issues and problems central to the field are explored by an analysis of relevant literature.

**PPAD 582 City Planning and the Political Process.** (3 Hours) A study of the planning process in urban and metropolitan areas, with particular attention to governmental and administrative policies and the machinery for dealing with problems involving complex political, economic, and technological factors and the planning process as it affects Black people.

**PPAD 585/785 Seminar in Urban Problems. (3 Hours)** An analysis of major urban problems, strategies and approaches proposed for their resolution, historical and political implications. Reformist efforts of government and private efforts will be examined with special emphasis on Post-New Deal developments and the impact on the Black community.

**PPAD 586/786 Urban Problems and Non-Traditional Options.** (3 Hours) An overview of the strategies, tactics and techniques of municipal administration. Innovative models for approaching

political issues unique to municipalities and the impact of urbanization are discussed.

**PPAD 587/787 Problems in Public Administration.** (3 Hours) Case studies are analyzed to illustrate the major problems confronting top bureaucrats in public agencies. Problems studied include administrative policies and the relationship of public agencies to their clients in specific administrative situations.

**PPAD 596 Research for Public Management.** (3 Hours) Prerequisite: Quantitative Analysis or equivalent. Empirical analysis for practical administrative problems and the development of new management techniques, including controlled social experimentation; simulation of policy issues; evaluation of future, alternatives. Diagnostic examination must be passed.

**PPAD 597 Internship.** (3 Hours) Prerequisite: Twelve hours graduate course work in Public Administration prior to this individual work experience in a government agency. (Prior approval in the preceding semester)

**PPAD 598 Thesis** (3 Hours) Prerequisite: Completion of coursework and comprehensive.

**PPAD 599/699 Independent Study.** (var 1-3 Hours) The student selects a research area which may be of benefit to his/her program. Topics must be approved by the faculty advisor and by the instructor selected by the student to supervise the research.

#### **Doctoral**

**PPAD 700 Health Care Finance and Administration** (3 Hours) Prerequisite: PPAD 549 and PPAD 536/736. The course provides an understanding of the fiscal environment of health care organizations and how economic concepts can be applied in the management and planning of health services.

**PPAD 705 The Scope of Public Administration.** (3 Hours) This class emphasizes the historical and ecological factors influencing the development of the discipline of Public Administration, as well as contemporary trends. Students will discuss issues such as privatization, the third sector ethnics, and executive leadership. Some effort is directed toward providing a comparative analysis in the context of public administration.

**PPAD 706 Quantitative Methods.** (3 Hours) This course familiarizes students with quantitative approaches which can be used to solve problems in public sector management.

**PPAD 707 Management of Information Systems.** (3 Hours) Design and utilization of systems to assist administrative information flows, data management, and computer application to public management.

**PPAD 708 Seminar in Contemporary Topics in Public Administration.** (3 Hours) "Cutting edge" information and contemporary trends and issues are explored.

**PPAD 709 Seminar in Executive Leadership.** (3 Hours) Leadership as an area of academic inquiry and skill development is the focus of this course. Students explore leadership from historical, behavioral, political, and administrative perspectives. Additionally, students

engage in research and projects which will help to develop their skills as executive leaders.

**PPAD 710 Epidemiology and Toxicology for Public Managers.** (3 Hours). Introduces and teaches students the concepts, theories, facts and principles of the study, prevention and treatment of disease and poison. The course includes conducting an epidemiological study.

**PPAD 712 Urban Management and Urban Services.** (3 Hours) Students examine and analyze the methods by which local public services are designed, delivered and evaluated.

**PPAD 738 Community Political Processes.** (3 Hours) Students analyze the political consequences of the underlying socio-economic forces operating in urban areas.

**PPAD 748 Public Personnel Human Resource Administration.** (3 Hours) Procedures and problems of governmental personnel administration are reviewed. Emphasis on staffing, remuneration, career system, motivation, evaluation, collective bargaining, and employee relations.

**PPAD 749 Public Finance Administration.** (3 Hours) Procedures for the control of public funds; assessment and collection of taxes; public borrowing and debt administration; preparation, enactment, and audit of the budget are reviewed.

**PPAD 752 Consumer Law.** (3 Hours) The law as it affects the rights of creditors and debtors, with special emphasis on the problems of the poor, is studied.

**PPAD 755 The Criminal Justice System.** (3 Hours) The process of law enforcement from commission of a crime through sentencing, trial, incarceration, and rehabilitation.

**PPAD 752 Urban History.** (3 Hours) Focuses on the growth of urbanism and the impact urbanization has had on the lives of Americans.

**PPAD 760 Financial Management In Public Organizations.** (3 Hours) Prerequisite: Public Finance Administration or equivalent. The management of organizational resources is focus of this course. While local governments will be highlighted, the principles and techniques have application to all public and quasi-public organizations.

**PPAD 770 Administration of Non-Profit Organizations.** (3 Hours) This course focuses on the role and character of private, non-profit organizations and their relationships with other sectors of the community. Examines the impact of recent public - particularly fiscal - decisions have had on service delivery in the non-profit environment. Visiting practitioners will make presentations to the class throughout the course.

**PPAD 776 Theories of Public Organization.** (3 Hours) This course exposes students of public-sector organizations to prominent explanations and theories of organizations as political, social and economic concepts. Major subject areas discussed are: (1) theories of individual and group behavior; (2) theories of organizational structure; (3) theories of organizational process.

**PPAD 777 Public Policy Formulation and Implementation.** (3 Hours) This course focuses on

problems of policy formulation, implementation, and evaluation. The participants will be exposed to such issues as seeing the need for policy issues, thinking through goals and objectives, policy adoption, and problems of implementation (including perceptible and real gaps between intent and bureaucratic interpretations).

**PPAD 781 Seminar in Community Development and Economic Development.** (3 Hours) Provides students with a basic understanding of the broad field of community and economic development as carried out by the federal, state and local levels of government, as well as the impact of neighborhood development

organizations. The course exposes students to a variety of readings, and to regular visits by practitioners.

**PPAD 782 Seminar In Program Development and Evaluation.** (3 Hours) This course teaches class participants the principles of program development and provides an understanding of how evaluators can help make government more effective by producing timely information on the promise and performance of existing programs.

**PPAD 796-90 Advanced Research Methods I.** (3 Hours) This is a research course in which participants will use both qualitative and quantitative techniques to address management problems. Students must take both semesters. (Pretest or evaluating or PPAD 606).

**PPAD 796-91 Advanced Research Methods II.** (3 Hours)

**PPAD 797 Internship.** (3 Hours) Executive-level, "hands-on," work experience in selected organizations. (Students must apply in the previous semester).

**PPAD 799 Independent Study.** (var. 1-3 Hours) The student is allowed to select a research topic of interest. Prior approval must be granted. (See PPAD 599).

**PPAD 798 Dissertation.** (3 Hours) This course is for students who are admitted to candidacy so that they may engage in the writing of the dissertations. (Prior approval).

#### **Faculty**

Dr. B. Herbert

Dr. E. Merem, Professor

Dr. M. Kumar, Associate Professor

Dr. J. Wesley, Associate Professor

Dr. T. D. Thomas, Associate Professor

#### **Mission of Program**

The Urban and Regional Planning (URP) programs seek to develop leaders in the field of city planning. The programs provide students with learning opportunities that enable them to develop the intellectual qualities necessary for meeting the broad and varied range of problems and challenges associated with urban growth and development. The Department of Urban and Regional Planning (DURP) offers a Master of Arts degree and a Doctor of Philosophy degree. The Master of Arts (M.A.) program is accredited through the Planning Accreditation Board (PAB) and is the only accredited Planning program in the State of Mississippi. The M.A. program consists of an inter-disciplinary curriculum of 49 semester hours, including practical community-based learning experiences and planning studios, while the Doctor of Philosophy consists of 48 semester hours, beyond the master's degree. Both programs have a special focus on increasing the number of under-represented groups and women in the profession. The rigorous programs are designed for both full-time and part-time students. The programs target recognition at the regional, state, and national levels.

#### **Program Objectives**

Urban and Regional Planning concentrates upon the challenging issues and problems confronting planning professionals and scholars in the rebuilding of cities across the nation. Courses and studios offer challenging scholarly and practical work that focuses attention on real world solutions while respecting the ethical, skill, and plan development practices of the profession.

#### **Master of Arts in Urban and Regional Planning**

##### **Admissions Requirements**

Admission to the graduate degree program in Urban and Regional Planning is governed by the regulation of the Division of Graduate Studies and Urban and Regional Planning. The following criteria must be met:

1. Admission by the Division of Graduate Studies;
2. A minimum grade point average of 3.0 on a 4.0 scale;
3. Consistent with Graduate School Guidelines, Conditional status may be assigned to students who possess a cumulative GPA of at least 2.50 – 2.99 at the undergraduate level (on 4.0 scale);
4. Satisfactory performance on the Graduate Record Examination or equivalent test;
5. Demonstrated promise for successful academic achievement in professional graduate work;

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### **Department of Urban and Regional Planning**

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Dr. Bernece Herbert, Associate Professor and Chair

101 W. Capitol Street, Jackson, MS 39201

Telephone: (601) 979-8732

E-mail: [bernece.herbert@jsums.edu](mailto:bernece.herbert@jsums.edu)

<http://www.jsums.edu/planning/>

6. For international students, indication of adequate financial support and satisfactory performance on TOEFL demonstrating oral and written proficiency;
7. Official statement of intent; and
8. Three letters of recommendation.

**Degree Requirements**

Urban and Regional Planning offers courses on a semester basis. Forty-nine credit hours are required for a master's degree. A basic core and three areas of concentration (Community Development and Housing, Environment and Land Use, and Urban Design) are offered. A thesis or major report option may be elected. An internship in a planning or planning related agency is required of all students with no prior planning or planning related experience

**Course Requirements**

**Core Courses**

(16 hours minimum)

Course	TitleS	Semester Hrs.
*URP 500	History of Planning	3
*URP 502	Planning Theory and Practice	3
*URP 504	Quantitative Analysis and Computers	4
*URP 506	Legal Aspects in Planning	3
*URP 508	Introduction to Urban Design	3

**Concentration Courses**

(15 hours minimum from one of the three concentration areas)

Community Development and Housing Concentration

Community development is an encompassing term, which includes all the facets of human effort to improve the quality of life in the environment. The term typically anticipates initiatives by members of the community to make these improvements with the assistance of advocates and government. The dynamics of the social, economic, and political spheres are included. A major element of community development is housing and its associated human settlement issues. The roles of the public and private sectors in determining the location, design, construction, and management of housing are central to the city planning function.

#URP 520	Housing Policy	3
URP 521	African American Community	3
#URP 522	Introduction to Community Development	3
URP 523	Social Policy Planning	3
**URP 524	Neighborhood Revitalization	3
URP 525	Land Development Dynamics	3
URP 526	Citizen Participation	3
URP 527	Public Finance Planning	3
URP 528	Economic Development Planning	3
URP 529	Planning in Local Government	3
URP 551	Regional Planning	3
URP 571	Introduction to Geographic Information Systems for	

Urban Planning

3

Environment and Land Use Concentration

This concentration focuses on an analysis of measures that conserve, preserve, and equitably distribute the ecological and social elements of the natural and built environment. The role of natural systems in efforts to achieve a sustainable environment is included in the study of environmental planning. In the investigation of environmental systems, planning seeks to identify and document the economic, political, and social outcomes of policies and programs that engage protective and preservative environmental measures.

#URP 530	Introduction to Environmental Planning	3
#URP 531	Growth Management	3
URP 532	Environmental Planning Ethics	3
URP 533	Rural Land Use Planning	3
URP 534	Environmental Impact Assessment	3
**URP 535	Comprehensive Planning	3
URP 536	Developing Nations Environmental Planning	3
URP 537	Plan Implementation	3
URP 538	Zoning and Land Use Regulation	3
URP 539	Risk Analysis	3
URP 571	Introduction to Geographic Information Systems for Urban Planning	3

Urban Design Concentration

Urban design, broadly understood, is place making. In urban design, we consider the many aspects of development and come to understand multiple analytic paths through which we can engage urban issues and contexts. We approach urban design as a socio-political phenomenon, embracing urban design as a web of relationships between private, public, and nonprofit interests that influence the relational and spatial configurations of our cities. The primary emphasis of the urban design curriculum is to support the development of citizens, planners, and scholars who are able to identify and analyze both urban issues and contexts, who are prepared to use context sensitive design principles and social science frameworks, and who are committed to leading creative approaches for improving the quality of life of those who live and work in urban areas.

URP 540	Historic Preservation and Conservation	3
#URP 541	Technical Skills of Composition and Communication	3
URP 542	Infrastructure and Community Facilities	3
URP 543	Computer-Aided Design I: Introduction	3
**URP 544	Design of Cities	3
URP 545	Computer-Aided Design II: Applications in Urban Design	3
URP 546	Site Development	3
#URP 547	Behavioral and Cultural Factors in Planning and Urban Design	3
URP 571	Introduction to Geographic	

Information Systems for Urban Planning	3
URP 572 Advanced Concepts in Geographic Information Systems for Urban Planning	3
<b>Electives</b>	9
Faculty Advisor's approval required.	
<b>Internship</b>	
*URP 570 Internship	3
<b>Thesis or Non-Thesis Option</b> (6 hours maximum in either thesis or non-thesis courses)	
<u>Thesis</u>	
URP 560 Thesis Research	3
URP 566 Master's Thesis	3
<u>Non-Thesis</u>	
Faculty Advisor's approval required.	
<i>Notes</i>	
*Required Course	
#Required Concentration Course	
**Required Concentration Studio Course	

### Curriculum Plans

#### 1. Community Development and Housing Concentrations: Non-Thesis Option Full Time Plan

<b>First Year-Fall Semester</b>	
URP 500 History of Planning	3
URP 502 Planning Theory and Practice	3
URP 520 Housing Policy	3
	9
<b>Spring Semester</b>	
URP 504 Quantitative Analysis and Computers	4
URP 508 Introduction to Urban Design	3
URP 522 Introduction to Community Design	3
	10
<b>Summer Semester</b>	
URP 521 African American Community	3
URP 555 Independent Study	3
	6
<b>Second Year- Fall Semester</b>	
URP 506 Legal Aspects in Planning	3
URP 523 Social Planning Policy	3
URP 524 Neighborhood Revitalization (Studio)	3
URP 570 Internship	3
	12
<b>Spring Semester</b>	
URP 526 Citizen Participation	3
URP 529 Planning in Local Government	3
URP 532 Environmental Planning Ethics	3
URP 551 Regional Planning	3
	12
<i>Total Hours</i>	49

#### 2. Urban Design Concentration Non-Thesis Option-Full Time Plan

##### First Year-Fall Semester

URP 500 History of Planning	3
URP 502 Planning Theory and Practice	3
URP 541 Technical Skills of Comp. and Comm.	3
	9
<b>Spring Semester</b>	
URP 504 Quantitative Analysis and Computers	4
URP 508 Introduction to Urban Design	3
URP 530 Introduction to Environ. Planning	3
URP 547 Behav. and Cult. Factor in Planning	3
	13
<b>Summer Semester</b>	
URP 521 African American Community	3
URP 533 Rural Land Use Planning	3
	6
<b>Second Year- Fall Semester</b>	
URP 506 Legal Aspects in Planning	3
URP 542 Infrastructure and Comm. Facilities	3
URP 543 Computer-Aided Design I	3
URP 544 Design of Cities (Studio)	3
	12
<b>Spring Semester</b>	
URP 522 Introduction to Community Develop.	3
URP 545 Computer-Aided Design II	3
URP 546 Site Development	3
URP 570 Internship	3
	12
<i>Total Hours</i>	49

#### 3. Environment and Land Use Concentration

##### Non-Thesis Option-Full Time Plan

<b>First Year-Fall Semester</b>	
URP 500 History of Planning	3
URP 502 Planning Theory and Practice	3
URP 530 Introduction to Environmental Planning	3
	9
<b>Spring Semester</b>	
URP 504 Quantitative Analysis and Computers	4
URP 508 Introduction to Urban Design	3
URP 531 Growth Management	3
	10
<b>Summer Semester</b>	
URP 533 Rural Land Use Planning	3
URP 537 Planning Implementation	3
	6
<b>Second Year- Fall Semester</b>	
URP 506 Legal Aspects in Planning	3
URP 534 Environmental Impact Assessment	3
URP 535 Comprehensive Planning	3
URP 538 Zoning and Land Use Regulation	3
	12
<b>Spring Semester</b>	
URP 532 Environmental Planning Ethics	3
URP 536 Developing Nations Environmental Planning	3
URP 539 Urban Sprawl (Studio)	3
URP 555 Independent Study	3
	12
<i>Total Hours</i>	49



**Ph.D. Program in  
Urban and Regional Planning**

**Admissions Requirements**

Admissions to the doctoral program is governed by the regulations of the Division of Graduate Studies and Urban and Regional Planning. The following criteria must be met:

1. Admissions by the Division of Graduate Studies at Jackson State University with a minimum grade point average of 3.0 on a 4.0 scale;
2. Satisfactory performance on the Graduate Record Examination or equivalent test.
3. Promise for successful academic achievement at the doctoral level.
4. For international students, indication of adequate financial support and satisfactory performance on TOEFL demonstrating oral and written proficiency.
5. Three letters of recommendation.
6. Substantive statement of proposed research within one of the Program's areas of concentration.
7. When applicable, a description of professional experience and/or samples of previous scholarly works.
8. A personal interview with a faculty when practical.

**Candidacy Requirements**

Students must successfully complete a comprehensive examination and prepare and defend a proposal for dissertation research prior to being declared a degree candidate.

**Degree Requirements**

Urban and Regional Planning offers courses on a semester basis. A basic core curriculum and three areas of concentration (Community Development and Housing, Environment and Land Use, and Urban Design) are offered. Thirty-six credit hours of course work beyond the master's degree are required prior to writing the dissertation. After completing these course requirements, students may earn a maximum of twelve additional credit hours of dissertation credit. The Ph.D. is awarded after successful completion and defense of the dissertation.

**Course Requirements**

<b>Core Courses</b>	<b>Semester</b>	
<b>Course Title</b>	<b>Hours</b>	
URP 700 Historical development of Cities	3	
URP 702 Theoretical Perspectives in Planning	3	
URP 710 Advanced Statistical Methods	3	
URP 712 Research Methodology	3	
URP 714 Ethics in Planning Seminar	3	
<i>Total Hours</i>		15

**Concentration Courses**

12 hours minimum from one of the three concentration areas.

Community Development and Housing Concentration

The following seminars and studios would apply toward this concentration:

- URP 720 Urban Housing Policies
- URP 722 Community Development and Housing
- URP 724 Urban Revitalization Studio
- URP 726 Citizen Participation Strategies
- URP 728 Local and Regional Economic Development Strategies
- URP 729 Politics of Planning in Local Government
- URP 760 Advanced Readings

Environment and Land Use Concentration

The following seminars and studios would apply toward this concentration:

- URP 730 Environment and Land Use
- URP 731 Urban Growth Containment Principles
- URP 732 Ethics of the Environment
- URP 733 Countryside Development and Planning
- URP 735 Land Use Planning Studio
- URP 736 International Human Settlements
- URP 737 Urban Implementation Strategies
- URP 760 Advanced Readings

Urban Design Concentration

The following seminars and studios would apply toward this concentration:

- URP 740 Foundations in Urban Design
- URP 742 Analytical and Evaluation Methods for Urban Design Research
- URP 744 Urban Design Studio
- URP 746 Urban Design Doctoral Seminar
- URP 760 Advanced Readings

**Electives** 9 hours minimum  
Faculty Advisor's Approval Required

**Dissertation** 12 hours minimum  
URP 899 Dissertation

**DESCRIPTION OF COURSES**

Core Area

**URP 500 History of Planning.** (3 hours) Introduction to the historical roots, periods, and personalities that have shaped the profession. A study in the development of the profession within the context of urban American history.

**URP 502 Planning Theory and Practice.** (3 hours) Overview of theories that have contributed to the development of contemporary urban planning; theories introduced include rationality, advocacy, and critical. Also studied are issues related to professional ethics, race and class, and urban development.

**URP 504 Quantitative Analysis and Computers.** (4 hours) Introduction to the use of quantitative reasoning and statistical techniques to solve planning and policy problems. This course focuses on application of

descriptive and inferential statistics, sampling, regression analysis and modeling.

**URP 506 Legal Aspects of Planning.** (3 hours) Introduction to the basis in constitutional, common, and statutory law for the authority of plan effectuation. This course delineates the legal and legislative bases for planning at the local, state, and federal levels.

**URP 508 Introduction to Urban Design** (3 hours) This course provides an understanding of the dynamics that created contemporary urban and regional spatial patterns, elements of physical planning in relation to social, economic, and political forces as well as the role of the urban designer in the planning process.

### **Community Development and Housing**

**URP 520 Housing Policy.** (3 hours) Thorough review of the problems and issues related to housing planning and policy dealing primarily with inter-relationships and interdependencies among socio-cultural, economic and physical aspects of housing. This course focuses on the social, political, and economic aspects of housing policy in the United States.

**URP 521 African American Community.** (3 hours) Investigates processes of community development for their application in community building in African American communities. Explores the development of a model for development and discusses various roles of participants in the community development process.

**URP 522 Introduction to Community Development.** (3 hours) Overview of the elements of the community development process including housing, economic development, education, public safety, social services, transportation, infrastructure, the environment, citizen participation and leadership. This course places an emphasis on the application of planning methods and theory to the resolution of community problems.

**URP 523 Social Policy Planning.** (3 hours) Introduction to the theory and practices of social policy planning with attention to spatial, policy, resource, and advocacy relationships. This course focuses on matters of social services, income maintenance, education, and health.

**URP 524 Neighborhood Revitalization.** (3 hours) Exploration of planning and political activities that contribute to the restoration of older neighborhoods. Impacts of economic, social, and political processes that govern decision making and funding for revitalization efforts.

**URP 525 Land Development Dynamics.** (3 hours) Emphasizes private decision making and development, public/private relationships, and regulatory activities. This course explores patterns of land utilization from the perspectives of the neighborhood, city, and metropolis.

**URP 526 Citizen Participation.** (3 hours) Introduction to the issues, policies, and techniques related to the role of citizens in the public decision making process. Consideration will be given to legislative requirements for public involvement as well as the role of survey research in the citizen participation process. Techniques for developing local capacity through

citizen mobilization and a focus on community building are explored.

**URP 527 Public Finance Planning.** (3 hours) Overview of the principle of public budgeting, capital budget planning and public finance strategies. This course considers issues surrounding local development and fiscal decision making as they relate to project planning, revenue sources and project evaluation.

**URP 528 Economic Development Planning.** (3 hours) Strategies and tools for developing employment, business ownership, and investment in local, state, and regional economies. This course focuses on contemporary economic development patterns and practices in central cities and urban areas in the South.

**URP 529 Planning in Local Government.** (3 hours) Examination of the role of local government in the city planning process. Special consideration is given to the functional areas of planning such as transportation, housing, neighborhoods, environmental constraints, and land use.

### **Environment and Land Use**

**URP 530 Introduction to Environmental Planning.** (3 hours) Comprehensive overview of the field and the efforts being made to organize, control, and coordinate environmental, aesthetic, and uses of nature and of man-made substances. This course focuses on the problems, potential solutions, and methodologies of public policy, law, and economics as they affect environmental issues in planning.

**URP 531 Growth Management.** (3 hours) Techniques employed to manage growth-related change and to implement plans. This course focuses on matters of capital investment, development impact analysis, impact mitigation, ethical implications, and alternative growth potentials.

**URP 532 Environmental Planning Ethics.** (3 hours) Investigation of the issues and affects of decision making related to environmental justice. This course focuses on the history of the development, cases, and advocacies for ethical decision making related to the environment.

**URP 533 Rural Land Use Planning.** (3 hours) Small-town planning, rural populations, and development dynamics are explored. This course focuses on the social, economic, political, and environmental factors that are employed by planners to assist citizens plan for quality futures.

**URP 534 Environmental Impact Assessment.** (3 hours) Reviews the theory and methodology of evaluating the potential impacts of development on the natural and social environments. This course gives attention to the legal and planning practice elements of assessing environmental impacts.

**URP 535 Comprehensive Planning.** (3 hours) Introduction to the theory and practice of urban and regional planning. Planning as a method of decision making and strategic choice, goal setting, alternative development, and implementation solutions.

**URP 536 Developing Nations Environmental Planning.** (3 hours) Examines urban development issues and impacts in Third World nations. This course explores issues of environmental quality, policy

responses, housing production, biological diversity, agriculture, conservation, wildlife management, and socio-economic pressures.

**URP 537 Plan Implementation.** (3 hours) Interactive community and governmental dynamics in plan implementation are explored. This course focuses on the use of land-use regulatory tools and community facilities in implementing the plan.

**URP 538 Zoning and Land Use Regulation.** (3 hours) The theory, practice, and consequences of zoning as a land use tool in the implementation plans. This course includes the legal and administrative elements employed in zoning law, ordinance preparation, and other regulatory devices.

**URP 539 Risk Analysis.** (3 hours) Introduces students to the concepts of risk and uncertainty and explores techniques for characterizing, framing, estimating, and communicating environmental risks. This course covers both human-related and natural risks and hazards.

#### **Urban Design**

**URP 540 Historic Preservation and Conservation.** (3 hours) Issues of revitalizing and preserving historic resources are explored. This course focuses on the history, context, methods, and public policies related to historic preservation movements and programs.

**URP 541 Technical Skills of Composition and Communication.** (3 hours) Studio introducing graphic communication (in two and three dimensions) as visual organization and sequencing of the complex and varied information considered in the decision-making process of planning. Exercise of cognitive and aesthetic judgment by selective use and drawing of lines, planes, perspective, solids, shade, shadow and color; including introduction to the examination of aesthetic, symbolic and cultural elements of design.

**URP 542 Infrastructure and Community Facilities.** (3 hours) Examines planning and policy issues surrounding public services and facilities. Topics include the distribution of the benefits and costs of various public services and fiscal, traffic, and environmental impacts of land development.

**URP 543 Computer-Aided Design I: Introduction.** (3 hours) Studio introducing the concepts, issues and methods of computer-aided design as a tool in the planning and urban design process. A previous knowledge of computers is not required. (Prerequisite: URP 541)

**URP 544 Design of Cities.** (3 hours) Investigates the development of physical form of cities through models, geographic landscape, and intentional human use. This course focuses on the manner in which people exploit land and human experiences that determine design principles.

**URP 545 Computer-Aided Design II: Applications in Urban Design.** (3 hours) Studio stressing advanced concepts and methods in computer-aided design as applied in urban design and site development. Topics include interactive and procedural approaches, parametric design, and integration of spatial modeling with other information-processing activities. Emphasis

is placed on the creation of three-dimensional models. (Prerequisite: URP 543)

**URP 546 Site Development.** (3 hours) Introduction to site analysis, using environmental and engineering principles and modeling exercises to analyze and understand the use of land for development purposes. This course focuses on elements of grading, drainage, and landscape architecture.

**URP 547 Behavioral and Cultural Factors in Planning and Urban Design.** (3 hours) Seminar concerning the relationship of social patterns, cultural values, and the formation of urban patterns. Explores the complexities involved in giving expression to human needs and desires in provision of shelter and movement systems, possibilities and limitations of building forms and public policies, and issues involved in relating the human-made to the natural environment.

#### **Other Courses**

**URP 550 Special Topics.** (3 hours) Students electing to not pursue the thesis option may enroll in this course to conduct a special project topic. A maximum of three credits are allowed for this course.

**URP 551 Regional Planning.** (3 hours) This course provides students with an in-depth understanding of regional planning - its historical roots, current practices, regionalism. Regional planning, metropolitan planning, and similar terms are constantly being used by planners. What do these terms mean? How can they influence practice and scholarship in this field?

**URP 555 Independent Study.** (3 hours) Students wishing to explore an in-depth study of a topic not directly offered in the curriculum may enroll in this course. A maximum of six credit hours of independent study may be accrued. Permission of the faculty is required.

**URP 560 Thesis Research.** (3 hours) Students pursuing the thesis option must enroll in this course. This course focuses on the methodology and techniques of writing a thesis, including the research and presentation of the document.

**URP 566 Master's Thesis.** (3 hours) Students electing the thesis option must obtain approval from the faculty for the prospectus. All requirements of the Graduate School for submission dates must be met.

**URP 570 Internship** (3 hours) All students must satisfactorily complete a Professional Development Assignment. The purpose of this internship is to provide students with opportunities to engage in experiential learning with governmental agencies, non-profit organizations and private corporations that confront and respond to planning problems and related issues. Students completing a Professional Development Assignment funded by Urban and Regional Planning must be enrolled in URP 570 Internship for one semester in order to receive three semester hours of credit. Students with prior experience in planning or a closely related field may take an additional three semester hours of elective in lieu of the internship with the approval of the Master's Director and Executive Director.

**URP 571 Introduction to Geographic Information Systems for Urban Planning** (3 hours). This course provides students with an introduction to the fundamentals of Geographic Information Systems (GIS). It will give students an understanding of the various components of a GIS. Data gathering techniques such as internet data, GPS data collection and government and private sources of data will be taught. Also, areas such as data models and structures for geographical information, geographic data input, data manipulation and data storage will be covered. Students also learn how to manipulate tabular data, query a GIS database, and present data clearly and efficiently using maps and charts.

**URP 572 Advanced Concepts in Geographic Information Systems for Urban Planning** (3 hours) This course covers the advanced concepts of Geographic Information Systems (GIS) technology and how it is being applied in urban and regional planning. Students will learn the processes to collect, organize, analyze and display geographic data obtained from such as address geocoding, GPS and CD ROM, etc. Each student will complete a series of lab exercises that illustrate the typical steps in a GIS project. Prerequisite: URP 571 or equivalent courses or experience in using GIS in the work environment with permission of the instructor.

#### Doctoral Courses

##### Core Courses

**URP 700 Historical Development of Cities.** (3 hours) Intensive investigation and discussion of major contributing factors to the economic, social and ecological development of cities. The course will require students to apply historical research methodologies in the analysis of urban agglomerations.

**URP 702 Theoretical Perspectives in Planning.** (3 hours) Study of the advanced theoretical concepts in urban planning and the relationship between planning theory and social science precepts. Comparative analysis of theories that stimulate planning thought and philosophy.

**URP 710 Advanced Statistical Methods.** (3 hours) The course is designed to offer state-of-the-art procedures and paradigms in statistical applications.

**URP 712 Research Methodology.** (3 hours) Students acquire a foundation in conceptualization, measurement, research design, prospectus preparation, data collection, approaches to data analysis, documentation, and presentation of substantive research.

**URP 714 Ethics in Planning.** (3 hours) In this course students examine the theory and practice of professional ethics. The principles of ethical thinking and behavior in the planning profession are covered extensively.

##### Community Development and Housing

**URP 720 Urban Housing Policies.** (3 Hours) This course examines the policies that impact housing systems in the United States. Factors contributing to housing shortages and housing costs are analyzed, and programs developed to address these issues are

evaluated. Additionally, the role of housing advocacy is studied.

**URP 722 Community Development and Housing.** (3 Hours) A thorough analysis and evaluation of the principles and practices of community development. Substantive areas of housing, economic development, education, public safety, social services, transportation, infrastructure, the environment, citizen participation and leadership will be selectively covered. This course places an emphasis on the application of planning methods and theory to the resolution of community problems.

**URP 724 Urban Revitalization Studio.** (3 Hours) In-depth study of a selected problem related to urban revitalization. Students will be required to prepare a detailed planning document addressing the redevelopment needs of a specific urban neighborhood or area. Topics vary each semester depending on research opportunities. Prerequisite: Specialization in community development and housing.

**URP 726 Citizen Participation Strategies.** (3 Hours) This course provides an intensive study of the roles of citizen participation influencing the public planning process. Consideration is given to emerging methods and programs for public involvement as well as the role of survey research in the citizen participation process. Techniques for developing local capacity through citizen mobilization and a focus on community building will be explored.

**URP 728 Local and Regional Economic Development Strategies** (3 Hours) An in-depth examination and evaluation of strategies and tools for developing employment, business ownership, and investment in local, state, and regional economics. This course allows students to conduct research on a specialized interest in the areas of economic development and finance, while gaining a greater understanding of the relationship between local and regional economic development patterns and practices.

**URP 729 Politics of Planning in Local Government** (3 Hours) This course will examine the key role of politics and the planning functions that are carried out by local governments within the United States. In this regard, key issues in several functional areas will be highlighted, such as sustainable development that will focus on transportation, environmental concerns, housing, land use and community economic development.

##### Environment and Land Use

**URP 730 Environment and Land Use** (3 Hours) This course investigates the major competing theories and policies related to the built environment and natural world. Methods of classifying and evaluating the effects of pollution upon natural and social systems are discussed.

**URP 731 Urban Growth Containment Principles.** (3 hours) To analyze theories and principles used to manage growth related change and to implement plans. This course focuses on the history, policies, legislation and theory of development impact as well as ethical

implications and smart growth scenarios needed to contain change.

**URP 732 Ethics of the Environment** (3 hours) The examination of environmental ethics problems emanating from planning practice and development. The course highlights the theory and evolution of philosophical discourse of the environment and ethical codes guiding current policies associated with ecosystem quality. This course provides an overview of the key philosophical issues and alternative theories in the field of environmental ethics. It also sharpens students' perspective on moral and ethical issues associated with the relationships between humans and the natural environment.

**URP 733 Countryside Development and Planning** (3 hours) In this course, students examine theories and practice of countryside development and planning. The principles of ecological, socioeconomic, political elements and developmental models shaping planning rural communities in a sustainable setting are covered extensively.

**URP 735 Brownfields Planning Studio.** (3 hours) Selective problems related to urban and/or rural issues are presented. Students are required to prepare (individually or in teams) area or comprehensive plans that are designed to provide alternative solutions to identified problems.

**URP 736 International Human Settlements.** (3 Hours) An overview of conditions, policies, and programs that characterize living patterns in international settings. Students are required to conduct research and make scholarly presentations regarding the diverse settlements found in western and non-western nations.

**URP 737 Urban Implementation Strategies** (3 Hours) The theories, practices and rationalizations for planner involvement in the implementation of alternatives are investigated. Students are required to present a formal strategy for the implementation of a planning proposal.

#### **Urban Design**

**URP 740 Foundations in Urban Design.** (3 Hours) Examination of the social, physical and cultural determinants of form, pattern, and space that expresses the heritage of urban design and city building; and the role of urban design in the fields of architecture, landscape architecture and urban planning.

**URP 742 Analytical and Evaluative Methods of Urban Design Research** (3 Hours) Exploration of the theoretical, methodological and practical issues of urban design, including urban space and morphology, conceptions of place, cognition, perception and information field theory. Students will gain a working competence in at least one of the methods analyzed. Focus on selected contemporary issues in commercial and neighborhood design and planning. Prerequisite: URP 740.

**URP 744 Urban Design Studio.** (3 Hours) Systematic study of specialized subject matter leading to the design and effectuation of physical improvement plans, program design, and public policies. Synthesis of urban design and planning issues and research methods in a

laboratory setting. Topics vary each year, depending on current planning interest and needs.

**URP 746 Urban Design Doctoral Seminar** (3 Hours) Discussion and critique of selected research work and analytical methods involving issues of urban design. Presentation and critique of research proposed by members of the seminar. Prerequisite: Completion of Ph.D. core courses and required urban design concentration courses.

#### **Other Courses**

**URP 750 Professional Practice Issues in Planning.** (3 Hours) The course is designed to study the most current and effective practices in the profession. A range of considerations related to the techniques of intervention, methods of design, and public involvement in the planning and decision making process are selectively covered.

**URP 751 Regional Planning for Sustainability** (3 hours) An exploration of regional planning in the United States and other countries, including developing nations. The course examines the history of urban planning and its contributions to sustainability at various geopolitical scales. It emphasizes the social, economic and ecological dimensions of regional planning and the centrality of regional cooperation and the key to sustainable development.

**URP 760 Advanced Readings.** (3 hours) In this colloquium students read and discuss the assigned books. The instructor facilitates the discussion. Each student will be responsible for at least two readings and weekly discussions.

**URP 770 Independent Study or Research Practice** (3 hours) By arrangement with the advisor and approval with the faculty, students may pursue a topic of special academic or research interest. The independent research must be at an advanced graduate level and related to the field of planning. May be repeated with change of topic.

**URP 771 Seminar in Geographic Information Systems for Urban Planning** (3 hours). Seminar in Geographic Information Systems for Urban Planning covers basic theories, concepts and structures in Geographic Information Systems (GIS). Data models and structures for geographic information, geographic data input, data manipulation and data storage will be covered. Student also learn how to manipulate tabular data, query a GIS database, and present data clearly and efficiently using maps and charts. Students will be expected to complete a project in the area of concentration utilizing basic GIS technology. This course is also directed at giving students an understanding of and experience with the practical use of GIS software and data.

**URP 772 Advanced GIS Applications in Urban Planning** (3 hours) Advanced GIS Applications builds upon the topics covered in the introductory course, URP 771 Seminar in Geographic Information Systems for Urban Planning. In preparation for the dissertation research requiring GIS application, this course covers the advanced concepts of GIS technology and its applications to urban and regional planning. Students will learn the processes to collect, organize, analyze and

display geographic data obtained from such as address geocoding, GPS and CD ROM, etc. Prerequisite: URP 771 Seminar in Geographic Information Systems for Urban Planning or equivalent courses or direct experience using GIS in the work environment may meet the prerequisite with approval from the academic advisor.

**URP 777 Doctoral Research Preparation** (1-6 hours)  
The course is designed to specifically and exclusively for those students who have completed all required coursework, obtained permission to enroll from the Executive Director, and seek time to prepare for the Comprehensive Examination. The course will permit qualified students to interact with faculty and colleagues to properly prepare for the Comprehensive Examination. Permission from the Executive Director is required.

**URP 899 Dissertation** (1-9 hours) Working with a faculty approved committee, the student is required to undertake dissertation research. Prerequisites: completion of all Ph.D. course work, approved dissertation proposal, and dissertator status with the Graduate School. Course may be repeated provided progress is being made on the dissertation.

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## SCHOOL OF SOCIAL WORK

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Dr. Isiah Marshall, Jr., Associate Dean and Associate Professor  
Office: 3825 Ridgewood Road  
Jackson, MS 39211  
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e-mail: isiah.marshall@jsums.edu

### Programs

- ① Master of Social Work
- ① Doctor of Philosophy in Social Work

### Accreditation

The Master of Social Work is accredited by the Council on Social Work Education (CSWE).

### Mission

The mission of the School of Social Work is to provide opportunities for a diverse student population to earn social work degrees at the baccalaureate, master, and doctoral levels. Students are provided a supportive academic environment in which to acquire the knowledge, skill, values and ethics of the social work profession. The School also focuses on the development of leadership and scholarship in social work practice.

The School's goals are to produce graduates who will apply their knowledge and skills toward enhancing the quality of life in the urban and rural environments and to equip graduates to promote empowerment of vulnerable individuals, families, groups, organizations, and communities at the local, national, and international levels. Graduates will be prepared to address issues of social responsibility by demonstrating a commitment to economic, political, and social justice and develop as leaders in social work practice, service, and scholarly activities.

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## MASTER OF SOCIAL WORK

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VACANT  
3825 Ridgewood Road  
Jackson, MS 39211 Telephone:  
(601) 979-8896  
e-mail:

### Faculty

Dr. G. Bhattacharya, Professor  
Dr. P. Hernandez, Associate Professor  
Dr. P. Jenkins, Visiting Assistant Professor  
Dr. J. Lee, Assistant Professor  
Dr. I. Marshall, Jr., Associate Professor  
Dr. S. Omari, Associate Professor  
Dr. G. Prater, Professor, Dean Emerita  
Dr. T. Johnson-Ratliff, Clinical Associate Professor  
Dr. K. Richards, Associate Professor  
Dr. J. Schroeder, Professor  
Dr. B. Davis Smith, Associate Professor  
Dr. S. Spence, Professor  
Dr. W. Thompson, Assistant Professor  
Dr. E. Yoon, Assistant Professor

### Mission of the Master of Social Work Program

The mission of the Master of Social Work (M.S.W.) Program is to prepare graduate level social workers for advanced direct social work practice with children, youth, and families in both urban and rural areas. The Program produces leaders who demonstrate and build upon the knowledge and skills of advanced direct social work practice; who exemplify the values and ethics of the profession; and who are responsive to the need for services, which promote social, economic, and political justice for all groups, especially those confronting discrimination and oppression. Thus, the Program works to increase the pool of master's level social

workers by providing a nurturing academic environment for promising students who reflect the diversity of the state, the nation, and the global community. The Master of Social Work Program supports the implementation of the missions of the University, the College of Public Service, and the School of Social Work.

The goals of the M.S.W. Program are:

1. To prepare students for advanced direct social work practice with children, youth, and families in local, national, and global settings with systems of all sizes;
2. To prepare students for leadership roles in the profession of social work and the social welfare arena;
3. To prepare students to identify patterns, dynamics, and consequences of social, economic, and political discrimination and oppression and promote appropriate change when necessary;
4. To prepare students for advanced direct social work practice in diverse organizational and social contexts, with an understanding of the ways in which these contexts influence social work practice and with the ability to promote appropriate change when necessary; and
5. To provide students with a challenging educational experience that develops self-awareness and assures the acquisition of the knowledge, skills, and values and ethics necessary for competent advanced direct social work practice.

The objectives of the M.S.W. Program are to ensure that graduates:

1. Demonstrate the knowledge, skills, and values and ethics relevant to advanced direct social work practice with children, youth and families in diverse environments;
2. Demonstrate self-awareness and the effective use of self in direct social work practice;
3. Evaluate their own practice in social work settings;
4. Evaluate and apply theoretical perspectives and research findings to practice;
5. Demonstrate the ability to use supervision and consultation appropriate to direct social work practice;
6. Integrate into direct practice a knowledge of the historical development of the profession and the differential impact of social, economic, and political policies;
7. Demonstrate the ability to advocate for social, economic, and political justice and promote appropriate change in organizational and social contexts;
8. Practice without discrimination and with sensitivity when serving diverse populations;
9. Utilize effective oral and written communication skills;

10. Apply critical thinking skills within the context of direct social work practice; and
11. Demonstrate leadership skills and abilities in practice settings.

### Admissions Criteria

Admission to the full-time and part-time MSW Program is determined on a selective basis according to the following criteria:

- ❶ A baccalaureate degree from an accredited college or university. Students may be admitted with a baccalaureate degree in a field other than social work or social welfare. Transcripts will be evaluated for the presence of courses that meet program requirements for a liberal arts background, inclusive of courses in human biology and statistics;
- ❶ A cumulative grade point average (GPA) of 2.75 on a 4.0 scale. Applicants with GPAs lower than 2.75 may be considered for admission.
- ❶ Academic and professional references;
- ❶ Written personal statement;
- ❶ Evidence of volunteer and/or work experience in the field of social work;
- ❶ An interview with the Admissions Committee may be required.

Admission to the Advanced Standing M.S.W. Program is determined on a selective basis according to the following criteria:

- ❶ Applicant must be a graduate of a CSWE accredited baccalaureate program within the past five (5) years.
- ❶ A letter grade of "B" or better in all social work courses. NO COURSE REPEATS.
- ❶ A cumulative grade point average of 3.0 on a 4.0 scale for undergraduate coursework.

\*An interview with the Admissions Committee may be required.

To facilitate determination of admission into the MSW Program, applicants must send materials to Graduate Studies. Admission materials to be submitted to Graduate Studies are as follows:

1. Graduate School Admission Application;
2. Out-of-state Application fee of \$25.00 if applicable;
3. Official transcript(s) from all colleges and universities attended;
4. Official copy of TOEFL Score(s), for applicants whose native language is not English;
5. Certified Declaration of Financial Support for International Students. Sufficient funds to cover expenses for one academic year should be placed on deposit with the Jackson State University Office of Fiscal Affairs; and
6. Immunization record showing proof of immunization compliance for measles and rubella, if born after December 1957.

7. Three recommendation forms from instructors, employers, supervisors, or professional colleagues;
8. Personal Statement;
9. Work Experience Form;
10. Graduate School Application for Financial Aid;
11. MSW Program Financial Aid Application; and,
12. MSW Program First-Year Field Instruction Application.

ALL MSW forms can be found on the MSW homepage under APPLICATION PACKET. These forms can be downloaded, filled out, saved, and uploaded to the Graduate Studies application portal (AdmissionPros).

Applicants with a social work degree granted outside the United States must request and submit an Application for Evaluation of Foreign Credentials from the Council of Social Work Education, Foreign Equivalency Determination Service. The address is: 1725 Duke Street, Suite 500 Alexandria, VA 22314-3459. Their website is: <http://www.cswe.org>. A copy of the evaluation is to be forwarded to the MSW Program Admissions.

### **Transfer Credits**

The MSW Program will accept a limited number of transfer students each year. Transfer credits, up to 30 semester hours, may be accepted from a master's degree program accredited by the Council on Social Work Education, based on a review by the MSW Admissions Committee. Applicants must meet the following requirements:

- ❶ Admission requirements of the MSW Program and the Graduate School at Jackson State University;
- ❷ Submit a letter of recommendation from the dean or dean's designee of the previous or current MSW program relative to the student's status during enrollment; and

Within 30 days of notification of acceptance into the Program and prior to enrollment, the student must submit a written statement of intent to transfer credit and the specific credit(s) for which transfer is requested to the MSW Program Coordinator.

The request for transfer of credit(s) must be accompanied by an official copy of the graduate catalog from the institution at which the course(s) were taken that covers the year(s) the course(s) was/were taken. For each course for which transfer credit is requested:

- ❶ The course must have been taken within the past five years,
- ❷ The student must have earned a minimum grade of 3.0 on a 4.0 scale; and
- ❸ The name of the course and the course syllabus (including the bibliography) must be provided.

### **Academic Credit for Life Experience and Work Experience**

No academic credit for life and work experience is given.

### **Duplication of Course Content in the Professional Foundation Curriculum**

Students may be exempt from courses in the foundation curriculum that represent duplication of course content previously taken. The courses must have been taken within five years of the date of the request for exemption, with a minimum grade of "B" or 3.0 on a 4.0-point scale.

Each request for exemption must: (1) be made in writing to the MSW Program Coordinator and be submitted **within 30 days of being notified of acceptance into the Program**; (2) specify the course for which the exemption is requested; (3) be accompanied by an official copy of the graduate catalogue from the institution at which the courses were taken that covers the year(s) the course was taken; and (4) be accompanied by a copy of the course syllabus, including bibliography and course assignment(s). Requests received after the deadline stated above and/or do not meet the requirements stated in this section will not be considered.

Following receipt of the request, a proficiency examination will be administered to determine the student's mastery of the content of the specified course. Proficiency will be determined by the student earning a grade of at least 3.0 on a 4.0 scale on the examination administered.

The MSW Program Coordinator will notify students of the proficiency examination results in writing. The results of the examination are final and there is no appeal of the grade received on the examination. Students who do not earn a minimum grade of "B" or 3.0 on a 4.0 scale on the examination must take the course for which exemption was requested.

Sixty semester credit hours are required for completion of the MSW Degree. Therefore, students who achieve a grade of 3.0 on a 4.0 scale on the examination administered and are exempted from a specific course or courses are required to take such additional courses as may be required to meet the compulsory sixty credit hours to earn the MSW degree. Courses must be approved by the MSW Program Coordinator.

### **Academic Performance**

#### **Passing Grades**

Students must have a cumulative 3.0 grade point average to graduate from the MSW Program. A grade less than "C" or 2.0 is considered failure in a social work course. Students may not receive a grade of "C" in more than two courses.



### Probation

If a student's cumulative grade point average falls below 3.0, the student will be placed on academic probation. The student will have until the end of the subsequent semester of enrollment to attain a cumulative grade point average of 3.0. Failure to attain the required cumulative grade point average by the end of the probationary period will result in dismissal of the student from the MSW Program. The probationary period in the MSW Program is defined as one subsequent semester of enrollment in the program after the cumulative grade point average falls below a 3.00.

### Repeating Courses

Students may repeat only one course in the program with the recommendation of the advisor and approval of the program coordinator. Students desirous of this option must submit a written request to the program coordinator during the subsequent semester or term/session in which the student is enrolled. The advisor must indicate support (or non-support) of the request in writing to the program coordinator. When a student is allowed to repeat a course, both grades will show on the transcript and both grades will be used in computing the cumulative grade point average.

### Graduate English Competency Examination

Graduate students are required to take this examination during the first semester of graduate study to demonstrate competency in the areas of English grammar and usage and general writing skills. Students with unsatisfactory performance on this examination must enroll in English 500 and attain a letter grade of "B" or 3.0 to pass this course. This requirement must be met before a student can take the comprehensive examination.

Advanced standing students are required to take the Graduate English Competency Examination during the summer session in which they enroll in the MSW Program.

### Degree Requirements

The MSW Program offers a two-year full-time curriculum. Foundation courses are offered in the first year, and the second year focuses on advanced direct practice with children, youth, and families. Students are required to successfully complete 60 credit hours to earn the MSW degree. The last 30 hours must be taken in residence at Jackson State University. Field instruction in the two-year full-time and three-year part-time curricula consists of two lock field instruction courses (i.e., four days per week), one in the foundation year, and one in the concentration curriculum, which all students take in the spring of the final semester in which they are enrolled in the program. Both foundation and concentration require courses 450 hours of field instruction. Students must complete a total of 900 hours in field instruction, which is the CSWE required minimum. The foundation field instruction course is SW 595, while SW 594 is designated as the concentration field instruction course.

If the student plans to enroll full-time, the program strongly advises against simultaneous full-time employment, which generates barriers to the completion of field instruction and class attendance. A three-year part-time curriculum is offered, requiring six semesters and two summer sessions for completion of the 60 credit hour MSW program. If the student plans part-time enrollment and is employed full-time or part-time, the program strongly advises the student to consult with his/her employer regarding arrangements to complete field instruction during the regular work day.

An advanced standing curriculum is offered which requires one summer and two semesters to complete requirements for the MSW Degree. Advanced standing students must be enrolled as full-time students throughout the program, beginning in the Graduate Summer Term. Field instruction begins in the Graduate Summer Term.

To enroll in field practicum, a student must provide documentation of professional liability insurance. Please contact the School of Social Work for the required minimum liability coverage.

The following are the academic requirements for Field Instruction:

1. Students must maintain a 3.0 cumulative grade point average and a 3.0 or grade of "B" in all practice courses to be eligible for Field Instruction. Students who do not have a 3.0 cumulative grade point average in courses required to meet the compulsory 60 credit hours or approved equivalency to earn the MSW degree, will not be eligible to enroll in a Field Instruction course. Students must earn a minimum grade of "B" or 3.0 in all of the practice courses.
2. Students are required to earn a 3.0 in all of the Field Instruction courses. Students may repeat one Field Instruction course in which a grade of less than 3.0 is earned. Students who fail to earn a minimum grade of 3.0 may not enroll in subsequent Field Instruction courses and are subject to dismissal from the MSW program.

### TWO-YEAR FULL-TIME CURRICULUM

#### Year One-Fall Semester

SW 510	Ethics and Social Work Practice	2
SW 560	Human Behavior and the Social Environment (HBSE I)	3
SW 571	Social Welfare Policy I	3
SW 580	Social Work Practice Skills Lab	1
SW 581	Social Work Practice I	3

SW	Social	Work
Elective		3
		15

**Spring Semester**

SW 572	Social Welfare Policy II	3
SW 582	Social Work Practice II	3
SW 595	Field Instruction I	<u>6</u>
		12

**Summer Session**

SW 561	Human Diversity	3
SW ____	Advanced Direct Practice Elective	<u>3</u>
		6

**Year Two-Fall Semester**

SW 555	Research Methods I	3
SW 562	Psychopathology	3
SW 584	Intervention with Children and Youth	3

SW 586	Family Intervention	3
SW ____	Advanced Direct Practice Elective	<u>3</u>
		15

**Spring Semester**

SW 556	Advanced Research Methods	3
SW 582	Advanced Direct Practice Seminar	3
SW 594	Field Instruction II	<u>6</u>
		12
	<i>Total Hours</i>	60

**THREE-YEAR PART-TIME CURRICULUM**

**Year One-Graduate Summer Session**

SW 560	Human Behavior and the Social Environment (HBSE I)	3
SW 571	Social Welfare Policy I	<u>3</u>
		6

**Fall Semester**

SW 510	Ethics in Social Work Practice II	2
SW 580	Social Work Practice Skills Lab	1
SW 581	Social Work Practice I	<u>3</u>
		6

**Spring Semester**

SW 555	Research Methods I	3
SW 572	Social Welfare Policy II	3
		6

**Year Two-Graduate Summer Session**

SW 561	Human Diversity (HBSE II)	3
SW ____	Social Work Elective	<u>3</u>
		6

**Fall Semester**

SW 582	Social Work Practice II	3
SW 595	Field Instruction I	<u>6</u>
		9

**Spring Semester**

SW 556	Advanced Research Methods	3
SW	Advanced Direct Practice Elective	<u>3</u>
		6

**Year Three-Graduate Summer Session**

SW 565	Psychopathology	3
SW	Advanced Direct Practice Elective	<u>3</u>
		6

**Fall Semester**

SW 584	Intervention with Children and Youth	3
SW 586	Family Intervention	<u>3</u>
		6

**Spring Semester**

SW 588	Advanced Direct Practice Seminar	3
SW 594	Field Instruction II	<u>6</u>
		9
	<i>Total Hours</i>	60

**ADVANCED STANDING CURRICULUM**

**Graduate Summer Term**

SW 510	Ethics and Social Work Practice	1
SW 580	Social Work Practice Skills Lab	1
SW 583	Integrated Social Work Practice	3
SW 593	Field Instruction	<u>3</u>
		8

**Fall Semester**

SW 562	Psychopathology	3
SW 584	Intervention with Children and Youth	3
SW 586	Family Intervention	3
SW	Advanced Direct Practice Electives	<u>6</u>
		15

**Spring Semester Courses**

SW 556	Advanced Research Methods	3
SW 588	Advanced Direct Practice Seminar	3
SW 594	Field Instruction II	6
SW	Social Work Elective	<u>3</u>
		15
	<i>Total Hours</i>	39

**DESCRIPTION OF COURSES**

Note: Prerequisites apply primarily to students enrolled for a degree in the MSW Program. Please consult the MSW Program for changes in course prerequisites, course content and course numbers.

**Practice**

**SW 580 Social Work Practice Lab** (1 Hour) This foundation course provides students with the opportunity to apply knowledge gained in the classroom (SW 581), and enables them to begin to develop the core skills necessary for successful advanced clinical practice.

**SW 581 Social Work Practice I** (3 Hours) This course provides an introduction to social work practice methodology and the professional use of self in combination with the generalists practice approach to social work with individuals, families, and small groups, and within the context of communities and organizations.

**SW 582 Social Work Practice II** (3 Hours) Prerequisite: SW 581(Social Work Practice I), SW 560 (Human Behavior and the Social Environment), continues the theory and skill development that began

in SW 581 (Social Work Practice I) by providing more in-depth knowledge and challenging learning situations in order for students to progressively build their practice capacities, and socialization skills in the profession of social work.

**SW 583 Integrated Social Work Practice (Advanced Standing).** (3 Hours) Prerequisite: Acceptance into advanced standing. This course is a review and refinement of practice skills and professional knowledge provided in the foundation curriculum content of the MSW program. The course focuses on the application and transformation of generalists' knowledge and skills to prepare for entry into the concentration curriculum. This bridging foundation course provides an opportunity for students to develop critical thinking skills and apply empowering practice decisions in professional practice settings with all sizes of client systems. Special emphasis is placed on the reciprocal interactions between individuals and their environments toward the engagement of personal and community strengths.

**SW 584 Intervention with Children and Youth** (3 Hours) Prerequisites: All foundation courses. This course is designed to provide advanced practice knowledge and skills for intervention with children and youth, primarily in the context of the urban environment. Special needs and vulnerabilities of these populations are addressed. Students are given orientations to the human services agencies primarily concerned with the complex issues and difficulties faced by these populations, and the implications of service delivery arrangements for clinical practice. Attention is directed to skills needed for the provision of services to children and youth in the context of their families and communities and to programmatic and advocacy activities on their behalf.

**SW 586 Family Intervention** (3 Hours) Prerequisites: All foundation courses. The focus of this course is on intervention with families. Advanced skills are developed in areas of social work practitioner roles, strength-based assessment, and specific models of intervention with families. Special attention is given to comparative approaches to couple and family intervention; relevant recent research findings related to family therapeutic approaches; the influences of environmental, ethnic, and cross-cultural variables; and ethical dilemmas in work with families.

### Policy

**SW 571 Social Welfare Policy and Services I** (3 Hours) This first required course in the Social Policy area examines the history and development of social welfare policy and services in American society, with a major focus on the evolution and contributions of professional social work to this development. Emphasis is placed on the dynamic relationship between social welfare policy and services and the modern, post-industrial society in the context of social work values and ethics and the pursuit of economic, political, and social justice.

**SW 572 Social Welfare Policy and Services II** (3 Hours) Prerequisites: SW 571 (Social Welfare Policy

and Services I), SW 560 (Human Behavior and the Social Environment I) and SW 510 (Ethics and Social Work Practice). This course builds on the introductory and historical content of SW 571 and focuses on the use of various conceptual frameworks to analyze and study current social welfare issues. Significant contemporary issues in social welfare policy will be examined with particular attention to the promotion of economic, political, and social justice with due consideration to needs and concerns of populations-at-risk and diverse groups. Permeating the course is consideration of content on ethnic groups and oppressed populations which are assessed as the most disadvantaged in American society, and how they are differentially affected by various social policies.

### Human Behavior and the Social Environment

**SW 560 Human Behavior and the Social Environment: HBSE I** (3 Hours) Using ecological, systems, and developmental frameworks, this course emphasizes the influence that individual and environmental circumstances have on shaping individual and family dynamics across the life course. This foundation course is designed to provide students with selected theoretical perspectives on the development, dynamics, and growth of individuals and families within their environmental context.

**SW 561 Human Diversity: HBSE II** (3 Hours) Prerequisites: SW 560 (Human Behavior and the Social Environment), SW 571 (Social Welfare Policy and Services I), and SW 510 (Ethics and Social Work Practice). This course examines various issues of diversity (e.g., ethnicity, culture, socioeconomic status, gender, sexual orientation, disability, religion) across life course development with emphasis on the impact of oppression and discrimination by society-at-large and individuals. Selected organizational and community theories are examined in relation to institutional impacts on various oppressed groups. In this regard, special attention is given to the plight of African Americans.

**SW 562 Psychopathology** (3 Hours) This course focuses on the clinic assessment of children, youth and families. Students will learn approaches of assessment to evaluate human behavior and functioning throughout life course development, with special attention to vulnerable and diverse populations. Particular attention will be directed to the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) as the major tool utilized in human services.

### Research

**SW 555 Research Methods I** (3 Hours) Prerequisites: SW 581 (Social Work Practice I), SW 571 (Social Welfare Policy and Services I), SW 560 (Human Behavior and the Social Environment I), SW 510 (Ethics and Social Work Practice). The foundation research course provides an introduction to the principles and methods of basic social work research. Students are introduced to concepts of problem formulation, measurement, research design, sampling, data collection, and data analysis as employed in basic

research. Particular attention is directed to social work research that addresses the economic, political, and social needs of people of color and populations-at-risk in American society. This course is designed to prepare students to understand and appreciate scientific research as a valuable tool in furthering professional capabilities and in contributing to the development of the growing body of knowledge in social work practice.

**SW 556 Advanced Research Methods (3 Hours)**  
Prerequisites: All foundation courses. This course is designed to assist students in understanding and applying scientific research methods in advanced direct practice settings. It builds on the research knowledge of the foundation research course. Students in this course are expected to become proficient in the methods and basic principles of conducting and evaluating empirical research related to advanced direct practice. In this course, students participate in guided research projects, which require a review of relevant research, data collection and analysis and implications for social work practice. Emphasis is given to the importance of demographic, biopsychosocial and cultural variables in the conduct of ethically based research.

#### **Field Instruction**

**SW 593 Field Instruction (Advanced Standing) (3 Hours)** Prerequisites: Acceptance into the Advanced Standing Program. The advanced standing field instruction course is taken concurrently with SW 583-Integrated Social Work Practice, the advanced standing bridging course. This course focuses on the application and transformation of generalists practice knowledge and skills to advance direct practice knowledge and skills with children, youth and families.

**SW 594 Field Instruction (6 Hours)** Prerequisites: All foundation courses. This course is designed as a block placement and is taken in the spring of the final semester in which the student is enrolled in the MSW Program. This course is taken concurrently with SW 588 (Advanced Direct Practice Seminar). This field instruction course is focused on advanced direct practice with children, youth, and families and designed to facilitate development of advanced direct practice competency and includes an integrated seminar.

**SW 594 Field Instruction II (6 Hours)** This course is designed as a block placement and is taken in the spring of the final semester in which the student is enrolled in the MSW Program. This field instruction course is focused on advanced direct practice with children, youth, and families and designed to facilitate development of advanced direct practice competency and includes an integrated seminar.

#### **Special Course**

**SW 510 Ethics and Social Work Practice (2 Hours)**  
This course is designed to orient students to values and ethics of the profession and to promote their internalization of the profession's values and ethics. Ethical issues and dilemmas in social work practice

have become much more numerous and challenging in recent years, due in large measure to technological advancements, especially biomedical technology; the trend toward an increasing proprietary emphasis in human services delivery; and specifically, social work practice; and conservative ideology that undergirds much of the current American social policy. Particular attention is directed toward ethical issues and dilemmas as they relate to social work malpractice and liability.

#### **Independent Study**

**SW 596 Independent Study (3 Hours)** This is an individually directed intensive study in an area of social work practice which is selected by the student. The independent study selection is made in accordance with the curriculum plan of the MSW Program and is approved by the student's faculty advisor and the Master of Social Work Program Coordinator.

#### **Electives**

**SW 515 Child Abuse and Neglect: Protective Services (3 Hours)** This course focuses on assessment and intervention skill development for social work practice with children and families who have experienced abuse and neglect or are at-risk of abuse and neglect. Clinical intervention strategies and dilemmas in role expectations of social work practitioners are analyzed. Attention is given to evaluation and use of research content in prevention and intervention services and programs.

**SW 520 Forensic Social Work (3 Hours)** This course focuses on issues common to the discipline of social work and the law. The course will include an introductory review of the law, the American justice system, and basic constitutional principles. Family-related issues-such as, the protection of children, education, adoption, custody and support, marriage, divorce, domestic violence, juvenile law, competency and guardianship-will be explored. Experiential components of the course are designed to prepare social work professionals for effective practice visa-vie the intersections of social work and the law.

**SW 521 Crisis Intervention (3 Hours)** The theory and methods of crisis intervention and subsequent consultation are examined in this course. Particular attention is given to the various contemporary techniques of intervention, consultation, referral, and resolution. Assessment techniques used in the intervention process are explored and skills practiced.

**SW 545 Administration in Social Welfare (3 Hours)**  
This course is designed to enhance the student's awareness and understanding of the basic knowledge and principles, which guide the administrative process of social welfare agencies. Administrative skills are taught in relation to the advanced direct practice practitioner as well as to other administrative roles.

**SW 546 Adult Development: Young Adulthood, Middle Years and Aging (3 Hours)** This course will focus on contemporary theories of adult development. It will highlight the stages of development for young adults, middle age and older persons. The processes of adult development will be explored from a

psychological perspective within the content of societal change. A critical in-depth analysis of adult development and its challenges and opportunities is required for successful completion of the course.

**SW 547 Intervention with the Elderly** (3 Hours) The most important goal for social service professionals is to improve the quality of life for older people through effective intervention on their behalf. This course will focus on skill development and knowledge and understanding of older persons' behavior through the public health model of preventive intervention at the primary, secondary, and tertiary levels. Intervention strategies and case studies will be utilized in the course to develop skills for working with the elderly in institutions and in the community. Models of social work practice with the elderly are critically analyzed.

**SW 548 Public Policy Issues in Aging** (3 Hours) This course provides an analysis of legislative policy and organized social welfare services and resources for the elderly as a social group in society. The political, economic, and social realities of aging that identify the elderly as requiring public policy solutions will be examined. Social policy analytical frameworks are employed to assess the legitimacy of aging as a social issue/problem and its impact on social institutions (family, social, political, economic, cultural).

**SW 549 Independent Study: Special Topics in Aging** (3 Hours) A primary focus of this course is its emphasis on the study special topics in aging in the behavioral, biological, and social sciences. In this regard, with faculty direction, students will explore, build upon and contribute to the knowledge base in aging and individual well being. Students will engage in research through the independent study process in specific areas of interest in gerontology to increase knowledge and skills for policy and/or practice with the aged.

**SW 550 Introduction to Social Gerontology** (3 Hours) This course is designed to give students a general overview of social gerontology as a branch of knowledge in the field of gerontology. Social gerontology concerns itself with psychosocial and economic aspects of the aged individual and the social problems encountered from living in both formal and informal societal groupings. The interaction of these aspects and groupings and the services established and considered for the aged through public and social policy will be discussed.

**SW 557 Applied Research Methods** (3 Hours) This course is designed for the implementation and analysis of the research project. The project is to be conducted, when feasible, in the student's field setting. Students will have the opportunity to explore approaches to data collection and analysis and apply descriptive and inferential statistical measures to data sets. Students will be responsible for the computer processing of data using appropriate statistical software packages.

**SW 573 Social Welfare Policy Affecting Children, Youth, and Families** (3 Hours) This course builds on the foundation course SW 572 (Social Welfare Policy and Services II) which provides an analysis of current policy arrangements and what needs to be done to affect

policies that promote economic, political, and social justice. In SW 573, students are challenged to think critically and creatively about how to best accomplish policy initiatives in keeping with social work values and ethics.

**SW 587 Advanced Social Work Practice with Groups** (3 Hours) Prerequisites: All foundation courses. The advanced social work practitioner is required to demonstrate group skills in a wide range of social situations. The foundation practice courses provide the basic skills for this course while the advanced practice with groups course expands, elaborates, and adds to the student's knowledge and skills. The focus of this course is on the development of knowledge and skills in the delivery of preventive, developmental, and remedial group services for at-risk populations of varying ages and social situations.

**SW 589 Urban Poverty: Intervention Approaches.** (3 Hours) This course focuses on developing services and programs especially tailored to meet the needs of the urban poor, who are disproportionately people of color. It addresses the multiple and negative impacts of urban poverty on children, youth and families and their functioning in the social environment. Community-oriented and family-centered services in schools, churches, public housing projects, and neighborhood service centers are examined in regard to their individual and collective potential to improve the lives of at-risk children and their families. Particular attention is given to continuing and contemporary urban problems of substance abuse, violence, teen pregnancy, school dropouts, unemployment and underemployment, and the impact of welfare reform on families and their functioning in the community.

PLEASE NOTE: ALL STATEMENTS IN THIS CATALOG DESCRIPTION OF THE MSW PROGRAM ARE ANNOUNCEMENTS OF CURRENT POLICIES AND ARE SUBJECT TO CHANGE WITHOUT NOTICE BY PROPER AUTHORITY.

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## DOCTOR OF PHILOSOPHY IN SOCIAL WORK

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### VACANT

3825 Ridgewood Road  
Jackson, MS 39211  
Telephone: 601-979-8896

### Faculty

Dr. G. Bhattacharya, Professor  
Dr. P. Hernandez, Associate Professor  
Dr. P. Jenkins, Visiting Assistant Professor  
Dr. J. Lee, Assistant Professor  
Dr. I. Marshall, Jr., Associate Professor  
Dr. S. Omari, Associate Professor  
Dr. G. Prater, Professor, Dean Emerita  
Dr. T. Johnson-Ratliff, Clinical Associate Professor  
Dr. K. Richards, Associate Professor  
Dr. J. Schroeder, Professor

Dr. B. Davis Smith, Associate Professor  
Dr. S. Spence, Professor  
Dr. W. Thompson, Assistant Professor  
Dr. E. Yoon, Assistant Professor

### **Mission**

The mission of the program is to prepare students for leadership roles as scholars in social work education and research who will advance knowledge about social work and social welfare to assist in resolving urban and rural issues facing families, communities, and society in general.

### **Objectives**

The objectives of the program are consistent with the missions of the School, College, and University. Students are required to demonstrate the following:

- Knowledge of the history, philosophy, and organization of social work education, related contemporary issues, and design, implementation and assessment of social work/social welfare curricula;
- Knowledge of social work perspectives and behavioral and social science theories and skills to analyze and assess their application to social work research;
- Knowledge of social science and social work research/statistics and skills to conduct rigorous scientific inquiry;
- Knowledge and skills required to synthesize, analyze, and evaluate social problems and social welfare policies, with emphasis on populations facing discrimination and oppression in the global society;
- Knowledge regarding a substantive research area of interest.
- Knowledge of the characteristics of higher education and related issues and strategies to enhance professional roles as scholars and educators.

### **Admissions Requirements**

Admission to the program is on a selective basis and is determined by the following criteria:

- Master's degree in social work from a program accredited by the Council on Social Work Education or a master's degree in a related discipline;
- Admission to the Division of Graduate Studies at Jackson State University;
- 3.3 or above G.P.A.,
- Above average undergraduate G.P.A.
- Satisfactory performance on the Graduate Record Examination (GRE) or Miller Analogies Test (MAT) taken within the past five years;
- For international applicants, satisfactory performance on TOEFL by demonstrating oral and written proficiency;

- For applicants with the M. S. W. Degree, professional competence as evidenced by at least two years of post-M.S.W. experience preferred;
- Statement of purpose reflecting applicant's philosophy of social work and educational goals;
- Scholarly or professional paper demonstrating the applicant's conceptual, analytical, or research ability; three letters of references (two academic and one professional);
- Curriculum vitae; and
- Interview with the Program Admissions Committee (contingent upon initial assessment).

**Admission to the Ph.D. Program is granted once a year for the Fall Semester. For full consideration, applicants must submit all required material by March 1.**

### **Transfer of Credits**

A maximum of nine graduate credit hours, excluding credit applied toward previous degrees, may be transferred from graduate degree programs at Jackson State University or other accredited universities to fulfill the elective requirements.

The transfer of relevant graduate course work will only be considered if a grade of "B" or better, on a four-point scale, has been earned, and the course has been completed within the last five years.

Transfer credit for courses taken prior to entering the program must be approved during the first semester of enrollment by the advisor and program director. Transfer credit applied toward the doctoral degree after admission to the program must be approved prior to taking the course by the advisor and program director.

### **Academic Performance**

The student must achieve a grade of "B" or better in all courses in the core curriculum. The student must maintain a "B" or better cumulative grade point average in all course work applied toward the degree.

### **Repeating Courses**

Students may repeat only one course in the program. They must enroll in the course the next semester or term/session in which the course is offered. When a student repeats a course, both grades will show on the transcript and both will be used in computing the cumulative grade point average.

### **Probation**

The probationary period in the program is defined as one subsequent semester of enrollment in the program after the cumulative grade point average falls below 3.00.

If a student's cumulative grade point average falls below 3.00, the student will be placed on academic probation the subsequent semester of enrollment. The student will have until the end of the probationary period to raise the cumulative average to 3.0. If the student fails to achieve a minimum cumulative grade point average of 3.0 by the end of the probationary period, the student will be dismissed from the program.

**Unsatisfactory Course Work and Dismissal**

A student whose course work is unsatisfactory (below 3.0 cumulative grade point average) at the end of the probationary period, as defined in the program, will be dismissed from the program.

**Residency Requirement**

The minimum period of residency for the degree in social work is one year or the equivalent of enrollment for two consecutive semesters. The student must be full time and therefore must take at least nine credit hours each semester counted toward residency. The student must meet the minimum residency requirement prior to taking the comprehensive examination.

**Time Limit**

Students must complete all degree requirements within seven years from the time of admission into the program. The average length of time for completion of doctoral programs in social work is 4.5 years. The actual amount of time required for completion will vary according to factors such as clarity of objectives upon entering the program and while moving through the process, prior preparation for research and knowledge building endeavors, and time for self-directed learning.

**Leave of Absence/Re-admission**

Any student who is in good standing may request a leave of absence for a period of up to one year. The request must be submitted in writing to the program director for the time period in which the student plans to be absent from the program. The request must outline the reason(s) for the leave and the time period involved.

Students must apply for re-admission to the program if more than 12 consecutive months have elapsed since enrollment. An application for re-admission requires the submission of all material required by the program at the time the applicant requests re-admission. Applications for re-admission will be considered with the other new applications.

**Degree Requirements**

**Core**

**Courses**

**Semester**

Course Title	Hours
SW 700 Doctoral Proseminar	3
SW 705 Social Welfare History and Philosophy	3
SW 710 Macro Theory	3
SW 711 Micro Theory	3
SW 714 Social Work Education Seminar:	

	Issues & Processes	3
SW 720	Research Methods I	3
SW 722	Statistical Methods I	3
SW 721	Research Methods II	3
SW 723	Statistical Methods II	3
SW 724	Policy and Practice Issues in Family and Children's Services	3
SW 725	Statistical Methods III: Advanced Quantitative Methods	3
SW 742	Qualitative Research Method	3
SW 760	Research Practicum in Family and Children Studies	3
	<b>Total Hours</b>	<b>39</b>

**Electives**

Students may select, in consultation with the advisor, a total of 12 credit hours of courses offerings in social work and a related discipline in the Graduate School at Jackson State University or at other colleges or universities.

**Dissertation Hours**

Following admission to candidacy, students must continuously register for a minimum of one-to-three dissertation hours per semester, for two consecutive semesters. Students must complete a minimum of four dissertation credits in order to complete the program/dissertation.

**Curriculum**

The curriculum is built upon the knowledge base of the social work profession and its values and principles. It also draws upon theoretical and empirical knowledge from related disciplines that are helpful in the formulation, analysis, and solution of social problems. Particular instruction focuses on theory building and assessment, research methods, social work education, critical analysis and assessment of social problems, social welfare policy and social work practice models/perspectives, and knowledge development in a substantive area of interest.

The curriculum consists of a minimum of 51 credit hours, excluding the dissertation hours. It is organized around three major components: core curriculum, electives, and dissertation.

**Core Curriculum**

The core curriculum consists of 39 credit hours. The courses focus on the history and philosophy of social welfare, social welfare policy, with emphasis children and their families, social work behavioral and social science theory, research methods, statistics, and social work education.

**Electives**

The elective courses offer students an array of subject-specific content to develop a substantive area of interest that complements the core curriculum and supports the dissertation work. Students may select, in consultation

with the advisor, a total of 12 credit hours of courses offerings in social work and a related discipline in the Graduate School at Jackson State University or at other universities.

### **Comprehensive Examination**

Students take the comprehensive examination upon successful completion of the core curriculum. The examination places emphasis on a comprehensive synthesis of material covered in the core courses, with special attention to the student's ability to conceptualize, integrate, and communicate knowledge. In case of failure, the student may be permitted only one additional opportunity to take the examination.

### **Admission to Candidacy**

The student enters candidacy for the degree after passing the comprehensive examination, which is administered after completion of the core courses.

### **Certification of Dissertation Proposal**

Candidates must submit a dissertation proposal to their dissertation committee for approval prior to implementing the research.

The proposal must be approved by the University's Institutional Review Board (IRB) whenever human subjects are proposed for use in the dissertation research. In cases where animal subjects will be used in the study, the research protocol must be approved by the Institutional Animal Care and Use Committee (IACUC).

### **Dissertation**

Candidates for the degree are required to complete a dissertation that demonstrates their ability to conduct rigorous scientific inquiry. The dissertation topic should emanate from the candidate's interest in a problem or issue relevant to social work or social welfare. The dissertation is expected to represent a substantial contribution to social work knowledge.

### **Oral Defense**

Upon completion of the dissertation, an oral examination is required. The purpose of the examination is to assess the candidate's ability to present and defend a conceptually and methodologically rigorous dissertation that contributes to social work knowledge. No student is permitted to defend the dissertation unless all requirements of the Ph.D. Program in Social Work, the School of Social Work, the College of Public Service, and the Division of Graduate Studies have been satisfied.

The student passes the oral defense when all dissertation committee members indicate agreement by signing the appropriate form.

## **Description of Courses**

**SW 700 Doctoral Proseminar (3 Hours)** This seminar is designed to enhance the students' matriculation in the doctoral program and their preparation for leadership roles as social work scholars and educators. As a backdrop, it provides an overview for discussion of higher education in general and doctoral education as a major focus of study in social work education. Students engage in dialogue and related activities considered essential to their success in the program and preparedness for their prospective professional roles as faculty in higher education.

**SW 705 Social Work History and Philosophy (3 Hours)** This course covers the evolution of social welfare in American society and focuses upon the current issues and trends in the development and delivery of various social welfare problems and services. Further, this course provides basic information on the history and evolution of professional social work in the United States. Particular attention is given to the emerging trends in social welfare policy and services and its values, and practices, as they relate to the social, economic, cultural, and political environment. Within this framework, philosophical themes of European/Anglo American culture are examined to demonstrate their influence on the character of social welfare and social work in the United States. This course also considers aspects of a welfare system important to a modern industrial society. The process of historical research is discussed in the context of social work and social welfare. Moreover, since the United States is a multicultural society that practices cultural oppression, there will be discussion of the social welfare practices regarding people of color, especially African Americans.

**SW 710 Macro Social Science Theory (3 Hours)** This course critically examines and assesses macro social science theories and explores how they are applied to social problems with major emphasis on scientific inquiry. Selected theories are examined, conceptual and philosophical assumptions assessed, values, constructs and propositions are considered, and empirical evidence analyzed and assessed. Particular attention is given to issues of inequality and oppression in relation to race, gender, and class. The course prepares students for the macro theories to guide their research. (Prerequisites: SW 711).

**SW 711 Micro Behavioral and Social Science Theory (3 Hours)** This course examines human behavior theories and theoretical approaches to child and family studies in social work. The course traces the development of major theoretical approaches in the social and behavioral sciences and examines emerging schools of thought. Conceptual and philosophical issues related to theory building in clinical practice are explored. Through an analysis of the theoretical knowledge base of social work practice with individuals, families, and other small groups, this course prepares students for subsequent use of theory in practice-focused research.

**SW 714 Social Work Education Seminar: Issues and Processes (3 Hours)** This course examines content, context, and processes in social work



education. It critically analyzes current issues and future trends in social work education. Among the areas covered are accreditation, values and ethics, educational and professional organizations, curriculum development, methods of instruction, career development, and ancillary educational roles.

**SW 720 Research Methods I** (3 Hours) This research course provides students with a foundation for understanding and conducting scientific inquiry in social work. It covers the research process, critically examining problem formulation, use of the literature and theory, research questions, hypothesis development, research design, sampling procedures, measurement, and data collection. Students also consider the ethical, philosophical, and other dimensions of research that are essential to understanding the role of research in social work.

**SW 721 Research Methods II** (3 Hours) This advanced research seminar attempts to equip the first-year doctoral students with the knowledge and competence in research methods that they will need in order to conduct future independent research activities aimed at increasing the social work knowledge base. It encompasses an in-depth study of quantitative research and a broad overview of qualitative research. Emphasis is placed on measurement, sampling, data analysis, research writing and other relevant issues in quantitative research. The course is designed to focus largely on the application of concepts learned in the first research methods course. In line with the research production thrust of the course, it involves a heavy experiential component in which much class time will be devoted to critiquing research articles and student projects. The expectation is that students will learn primarily by applying what they studied “by doing and receiving critical feedback regarding what they have done.” (Prerequisites: SW 720).

**SW 722 Statistical Methods I** (3 Hours) This course provides a review of basic statistical concepts and a thorough examination of univariate and bivariate statistical methods. Emphasis is placed on providing a conceptual framework for understanding when, why, and how different statistical techniques are used, and a working knowledge of the basic tenets of statistical reasoning.

**SW 723 Statistical Methods II** (3 Hours) This course builds on the first statistical methods course with an emphasis on building the students’ conceptual understanding of statistical procedures in addition to their effective use of statistical programs such as SPSS and an accurate interpretation of results. Students are introduced to multivariate and multi-variable data analysis and linear statistical methods in social work research. Particular emphasis is placed on the procedures involved in multiple independent and dependent variables use simultaneously in a comprehensive design. (Prerequisites: SW 720 and SW 722).

**SW 724 Policy and Practice Issues in Family and Children’s Services** (3 Hours) This seminar is designed to provide students with an opportunity to explore policies, programs, services and related

practice issues affecting families and children. It focuses on the nature of selected policies, the policy-making process, factors that influence policy formulation, implementation, and evaluation; and approaches to policy analysis. Particular emphasis is placed on critical examination of selected policy and practice issues related to families and children. Students are expected to analyze a major policy affecting families and children and prepare a related policy or practice issue paper.

**SW 725 Statistical Methods III: Advanced Quantitative Methods** (3 Hours). This course builds on the previous methods courses. It concentrates on advanced quantitative statistical procedures to provide an integrated and in-depth applied approach to data analysis and linear statistical models in social work research. Particular emphasis is placed on higher level statistical methods involved with multiple independent and dependent variables used simultaneously in a comprehensive design. Familiarity with the use of SPSS for data analysis is required. (Prerequisites: SW 720, SW 721, SW 722 and SW 723).

**SW 732 Independent Study** (3 Hours). This individualized study course provides students an opportunity to enhance their capacity in independent investigation and learning. Students request approval for an individualized course of study with a well-defined plan consistent with their research area of interest. It is expected the Independent Study will not substantially cover content and/or material covered in regular courses in the curriculum.

**SW 742 Qualitative Research Methods** (3 hours) This course examines the assumptions, theories, and practice of qualitative research in the social sciences. It is designed to facilitate the development of specific qualitative research skills while fostering familiarity with theories, issues and problems in qualitative research. This course also examines the relationships between the theoretical underpinnings and purposes of qualitative and quantitative inquiry. (Prerequisites: SW 720 and SW 721).

**SW 754 Health Policy Issues in the United States** (3 Hours). This course examines national health policy trends and their implications for access to health care at the state and local levels. It explores issues of accessibility, affordability, and availability, and their implications for social work.

**SW 760 Research Practicum** (3 Hours). This individualized learning experience course is designed to provide students with “hands-on” research experience prior to the dissertation project. The course requires development of a work plan consistent with one of two options. Students may elect to work with a faculty member regarding an ongoing or initiated research project. Alternatively, the student can conduct an independent research project under the supervision of a faculty member. (Prerequisites: SW 720, SW 721, SW 722, SW 723, SW 725 and SW 742).

**SW 770 Dissertation** (3-15 Hours). Students culminate their doctoral study by completing a major conceptually

and methodologically rigorous research project of interest that contributes to social work knowledge. The topic of the dissertation is approved by the dissertation committee. Students must defend orally the document before the committee in a public forum. (Prerequisites: Completion of all core coursework, passing of the comprehensive examination and consent of the dissertation committee chair).

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**NOTE:** All statements in this catalog description of the Ph.D. Program in Social Work are announcements of current policies and are subject to change.

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## COLLEGE OF SCIENCE, ENGINEERING AND TECHNOLOGY

### Dr. Wilbur Walters, Dean

**Dr. Paul B. Tchounwou**, Associate Dean and  
Presidential Distinguished Professor  
Box 18750  
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### Departments/Programs

- Department of Biology
- Department of Chemistry, Physics and Atmospheric Sciences
- Department of Civil and Environmental Engineering, and Industrial Systems and Technology
- Department of Electrical and Computer Engineering, and Computer Science
- Department of Mathematics and Statistical Sciences
- Graduate Engineering Programs
- Interdisciplinary Computational Data-Enabled Science and Engineering

The College of Science, Engineering, and Technology (CSET) was authorized in 2002, through an academic reorganization plan that combined the School of Science and Technology with the School of Engineering. The focal point of CSET's vision is the preparation of highly qualified and competitive graduates. Academic programs help to fulfill this vision, which is complemented by a faculty with a rich diversity of recognized scholars, and scientists who have established reputations around the world. A capable and energetic administration, with a well-trained staff, is in place to provide the knowledge, support and experiences required to ensure and enhance productivity in the academic environment.

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### DEPARTMENT OF BIOLOGY

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Dr. Timothy Turner, Professor and Chair  
P.O. Box 18540  
Telephone: (601)-979-2586  
Fax: (601) 203-5139  
E-mail: timothy.turner@jsums.edu

#### Faculty

Dr. H. A. Ahmad, Professor  
Dr. I. Farah, Professor  
Dr. B. Graham, Associate Professor  
Dr. C. Howard, Professor  
Dr. H. C. Huang, Assistant Professor  
Dr. R. Kafoury, Associate Professor  
Dr. R. Kulawardhana, Assistant Professor  
Dr. K. Ndebele, Associate Professor  
Dr. F. Noubissi, Assistant Professor  
Dr. M. Pacurari, Associate Professor  
Dr. A. Patlolla, Assistant Professor  
Dr. J. Stevens, Professor  
Dr. T. Taylor, Assistant Professor  
Dr. P. Tchounwou, Presidential Distinguished Professor  
Dr. B. Thoma, Assistant Professor  
Dr. C. Yedjou, Associate Professor

#### Degree Programs

The Department of Biology in the College of Science, Engineering and Technology (CSET) offers graduate studies leading toward the Master of Science (M.S.) in Biology. The M.S. degree is research-oriented and designed to satisfy academic requirements for those students intending eventually to seek degree(s) beyond the master's level. There are two concentrations; Biology and Environmental Science.

#### Programs Objectives

1. To provide advanced academic and practical training at the master's degree level,
2. To contribute to the pool of biologists and environmental scientists qualified to undertake doctoral degree programs, and to obtain employment in industry, government and academic institutions, and

3. To offer a program that will enable biology and environmental science majors to obtain the necessary classroom, laboratory and/or field experiences required for entering areas in and related to biological and environmental sciences directly upon graduation.

### **Admissions Requirements**

In addition to the requirements set forth by JSU's Graduate Studies, all applicants seeking admission to the M.S. in Biology and/or M.S. in Environmental Science programs in the Department of Biology must meet the following minimum admission requirements:

1. An undergraduate (B.S.) degree in biology or related field.
2. A minimum undergraduate grade point average (GPA) of 3.00 or higher as evidenced by an official transcript from all accredited colleges and universities attended (Note: Conditional admission may be assigned to applicants who possess a cumulative GPA of at least 2.50-2.99 at the undergraduate level (on a 4.0 scale) and meet other admission requirements),
3. Application for admission to JSU Graduate School.
4. Three letters of recommendation. Student should submit the names of three professors who will write letters of recommendation. Recommenders' will be sent a link to upload evaluation forms and their letters to the graduate school portal.  
Recommendations should be from academic professors who can assess the applicant's: a) academic qualifications; b) written and oral communication skills; c) capacity for critical and analytical thinking; and d) overall potential for graduate studies; Letters of recommendation forms are available at the Graduate School's website
5. For International applicants: a satisfactory Test of English as Foreign Language (TOEFL) score; and a Certified Declaration of Financial Support filed with JSU,
6. A career goal statement (maximum of 800-1200 words),
7. A complete application package submitted via the graduate school admissions portal: AdmissionPros.

### **Transfer of Credits**

Courses for which transfer credits are sought must have been completed with a grade of "B" or better. Approval is required by the Chair of the Department.

### **Time Limit**

No student will be granted an M.S. degree unless all requirements are completed within a period of eight (8)

consecutive calendar years from the time of admission to the program.

### **Residence**

Students are required to spend one academic year in resident study on campus. One academic year may include two consecutive regular semesters or one regular semester and one adjacent summer session. To satisfy the continuous residence requirement, the student must complete a minimum of eighteen (18) hours for the required period.

### **Admission to Candidacy Requirements**

When approximately 12-15 semester hours have been completed, the student should make application for advancement to candidacy. Please note that students cannot be advanced to candidacy until:

1. All admission requirements have been met.
2. Notification of the program option the student is electing, or that is required.
3. All incompletes ("I" grades) have been removed.
4. The Graduate English Competency Examination (GECE) was passed, or in the event of failure, passed ENG 500 with a grade of B or better. Please refer to the graduate Catalogue page 20 for the GECE exemption requirements.
5. Earned a 3.00 cumulative G. P. A.
6. The Application for Graduate Degree Candidacy is filed (GNST 500.)

### **Degree Requirements**

A student seeking the M.S. in Biology degree must:

1. Complete a minimum of thirty (30) semester hours with a B or higher cumulative G.P.A. Six (6) of the required semester hours must be in Thesis Research
2. Pass the Graduate Area Comprehensive Examination (GACE) in one elective and two core/required courses.
3. Successfully defend the thesis before the Thesis Committee and public audience.
4. Submit an approved thesis to the Chair of the Department of Biology with one bound copy to the Department and one to the JSU library.
5. Completion of all departmental requirements. Please visit: <http://www.jsu.edu/biology/program-overview-admission-requirements/>.

### **Master of Science in Biology**

Courses available for the M.S. degree in Biology provide 1) advanced preparation in biological and marine sciences, 2) provide preparation for advanced professional degrees elsewhere in zoology, plant science, marine science, environmental biology, environmental health, biomedical science, toxicology,

genetics, immunology, physiology, microbiology, biochemistry, anatomy and other associated areas, 3) research careers in industry, government and academic institutions, and 4) preparation for professional degrees in medicine, dentistry, veterinary medicine, pharmacy and related health fields.

#### Required Core Courses

Course	Title	Semester Hours
BIO 511	Biostatistics	3
BIO 515	Molecular Biology	3
BIOL 515	Molecular Biology Laboratory	1
<i>or</i>		
BIO 540	Cell Biology	3
BIO 540L	Cell Biology Laboratory	1
<i>or</i>		
CHEM 531	Biochemistry	3
CHML 531	Biochemistry Laboratory	1
BIO 589	Graduate Seminar	1
BIO 599	Thesis Research	6
<b>Total Hours</b>		<b>14</b>

#### Elective Courses (Total = 16 semester hours)

A student in consultation with his/her advisor and the graduate committee must select a minimum of sixteen (16) semester hours from departmental course offerings to complete degree requirements with emphasis in one of the following areas: Molecular Biology, Developmental Biology, Genetics, Microbiology, Plant Biology/Science, Anatomy and Physiology, Environmental Science, Marine Biology, and/or Invertebrate Zoology.

**BIO 507 Biology for Elementary Teachers.** (3 Hours) Prerequisites: None. The application of biological procedures and techniques at the elementary school level with emphasis on selected topics in biology.

**BIOL 507 Biology for Elementary Teachers Laboratory.** (1 hour) Prerequisite: BIO 101. Laboratory designed to expand and illustrate subject-matter areas stressed in BIO 507.

**BIO 508 Fundamentals of Electron Microscopy.** (4 hours) Prerequisites: Senior, graduate level, and consent of instructor. To introduce the students to the techniques of electron microscopy so that they may be able to initiate their own biological investigations. Emphasis will be placed on laboratory work.

**BIO 509 General Genetics.** (4 Hours) Prerequisite: BIO 318. A study of the principal concepts of heredity to include the application of classical and modern genetics.

**BIO 511 Biostatistics.** (3 Hours) This course is designed for students in biological sciences with no advanced training in mathematics. Basic concepts in statistical methods and experimental techniques and their general applicability in biology will be stressed.

**BIO 512 Natural Resources and Conservation** (3 hours) A study of our natural resources with emphasis on their origin, properties, use and misuse and good conservation practices.

**BIOL 512 Natural Resources and Conservation Lab.** (1 hour) Students are involved in the collection of data concerning the use and the analysis of conservation practices for both domestic and public waste, water, and energy resources.

**BIO 513 Advanced Human Nutrition.** (3 hours) Prerequisites: BIO 233 or 218 and CHEM 241. Review of nutrient sources, requirements and deficiency diseases of man. Emphasis on nutritional metabolism under normal and pathological conditions, and current research.

**BIO 514 Methods of Environmental Analysis.** (3 Hours) Theory, methods and techniques for identifying and qualifying environmental contaminants. Sampling methods are discussed and some coverage is provided on methods for separation and concentration.

**BIO 515 Molecular Biology.** (3 Hours) Study of the structure, synthesis, isolation and interactions of macromolecules of biological interest.

**BIOL 515 Molecular Biology Laboratory.** (1 Hour) Prerequisite: Must be taken concurrently with BIO 515. Laboratory techniques used to purify proteins, DNA, and RNA and the methods used to analyze these macromolecules.

**\*BIO 516 Marine Botany.** (3 Hours) Prerequisites: BIO 119, BIOL 119, BIO 416; open to qualified undergraduates. Survey of seaweeds (marine algae), marine phytoplankton and maritime vascular plants, treating structure, reproduction, life histories, distribution and ecology. Lecture and laboratory to be taken during same semester.

**\*BIOL 516 Marine Botany Laboratory.** (1 Hour) Prerequisite: Must be taken with lectures in BIO 516. Collection, preservation and preparation and microscopic examination with purpose of emphasizing identification of seaweeds.

**BIO 517 Introduction to Remote Sensing for Environmental Science.** (3 hours) Prerequisites: PHY201, 202, MATH 111, 115, 231. This course introduces the theory and techniques of remote sensing and their application to environmental analysis. Topics include the concepts of remote sensing; characteristics of spectromagnetic waves; types of remotely sensed data; sensor types; the theory of photogrammetric techniques; digital image analysis for acquisition of geographical information. Several lab activities involve: learning of basics of ERDAS Imagine; data acquisition through Internet search for satellite images; importing datasets, band characteristics & visual presentation.

**BIO 518 Application of Remote Sensing in Environmental Science.** (3 hours) Prerequisite: BIO 517. This course covers the quantitative and applied aspects and analysis of remotely sensed digital data. This course is designed to provide an understanding of digital image processing, analysis, and interpretation techniques. Topics include digital data visualization; geometric, radiometric, and atmospheric correction;

image enhancement and manipulation; information extraction; digital change detection; integration of GIS and remotely sensed data, and spatial modeling. Laboratory exercises are in-depth applications of the exercise topics that were covered in BIO 417/517 as well as thematic information extraction and change detection.

**BIO 520 Biological Photography.** (3 Hours) Prerequisite: Consent of instructor. The course is designed to equip students with the knowledge and expertise to produce high quality prints and slides. Emphasis is placed on laboratory work (darkroom).

**BIOL 520 Biological Photography Laboratory.** (1 Hour) Laboratory activities give the student experience in exposing and developing black and white films and making prints with various print papers. Must be taken concurrently with BIO 520.

**BIO 521 Plant Morphology.** (3 Hours) Prerequisite: BIO 119. Study of anatomical, reproductive, ontogenetic and phylogenetic aspects of vascular and non-vascular plants.

**BIOL 521 Plant Morphology Laboratory.** (1 Hour) Selection of exercises involving the structures, developments and relationships of nonvascular and vascular plants.

**BIO 522 Plant Taxonomy.** (3 Hours) Prerequisite: Bio 119. Classification and nomenclature of flowering plants; introductory method of collection; laboratory and field studies of representative plant families.

**BIOL 522 Plant Taxonomy Laboratory.** (1 Hour) Prerequisites: Botany 118, 119. Exercises on collection, classification and nomenclature of flowering plants.

**BIO 523 Ecology.** (3 Hours) Prerequisite: Senior standing or consent of instructor. A study of the tropic relationships and energy transfer in ecosystems.

**BIOL 523 Ecology Lab.** (1 Hour) This lab course is designed to be, and should be, taken concurrently with the Ecology lecture course (BIO 523). The ecology laboratory sessions are structured to reinforce topics discussed in lecture and provide a treatment of technical topics not covered in the lecture. Methods common to the laboratory and field will be taught. Students will 1) gain a deeper, understanding of the main concepts of ecology and ecological processes and 2) develop critical and analytical thinking skills along with reasoning and logical thinking skills, and apply them to ecological concepts.

**BIO 524 Plant Physiology.** (3 Hours) Prerequisite: BIO 119. Principal physiological processes of plants including water relation, synthesis, and use of foods and growth phenomena are discussed.

**BIOL 524 Plant Physiology Laboratory.** (1 Hour) Laboratory exercises will be continued to verify the principles of Plant Physiology.

**\*BIO 525 Introduction to Marine Geology.** (1 Hour) Prerequisites: BIO 408, 408A, or permission of instructor; open to advanced undergraduates. Introductory geology from the marine viewpoint; morphology and origin of ocean basins, plate tectonics, marine sedimentation, coastal features and marine georesources. Lecture and laboratory to be taken during same semester.

**\*BIO 525 Introduction to Marine Geology Laboratory.** (1 Hour) Prerequisite: Must be taken with lectures in BIO 525. Field and laboratory exercises in recognition of geological features and specimens, study of techniques, core samples, mapping and marine topographic profiles.

**BIO 526 Mycology.** (3 Hours) Prerequisite: BIO 119. A survey of the principal fungal classes. Morphology and cytology of fungi and their relation to industry and agriculture.

**BIO 528 Evolution.** (3 Hours) Prerequisite: BIO 409 or the equivalent. A study of the processes of organic change. Historical developments of the major concepts and mechanisms. (S)

**BIO 529 Plant Anatomy.** (3 Hours) An introduction to cell division, development, and maturation of the structures of the vascular plants.

**BIOL 529 Plant Anatomy Laboratory.** (1 Hour) Selection of exercises involving cell division, development and maturation of the structures of vascular plants.

**BIO 530 Advanced Microbiology.** (3 Hours) Prerequisites: BIO 313; CHEM 242. Special techniques for culturing microorganisms. Includes a survey of some of the important microbes in medicine, industry and public health.

**BIOL 530 Advanced Microbiology Laboratory.** (1 Hour) Teaches the student special methods in isolating, culturing, and identifying certain microorganisms of medical and industrial importance. Must be taken concurrently with BIO 530.

**BIO 531 Invertebrate Zoology.** (3 Hours) Prerequisites: BIO 114, CHEM 142. Intended for students who wish to obtain a comprehensive knowledge of the invertebrates.

**BIOL 531 Invertebrate Zoology Laboratory.** (1 Hour) Prerequisite: Must be taken concurrently With BIO 531. A taxonomy consideration of the invertebrate fauna. Students are also introduced to empirical observation in such areas as ecology, physiology and behavior.

**BIO 532 Advanced Parasitology.** (3 Hours) Prerequisites: BIO 331; CHEM 142, 242. The physiology of specific parasite and host-parasite relationships will be studied in great detail. Clinical specimens will be studied.

**BIOL 532 Advanced Parasitology Laboratory.** (1 Hour) Prerequisite: BIO 331 and/or consent of the instructor. The course will emphasize the experimental approach to Parasitology. Important parasites of man and other animals will be studied from clinical specimens. Must be taken with BIO 532.

**BIO 533 The Biology of Water Pollution** (3 hours) Biological approaches to water pollution problems is discussed. The effect of pollution on life in aquatic environments is emphasized.

**BIOL 533 The Biology of Water Pollution Lab.** (1 hour) Selected laboratory exercises, instrument use, and field trips are designed to further enhance the student's awareness in water pollution effects, analysis and problem solving.

**BIO 534 Ichthyology.** (3 Hours) Prerequisites: BIO 115, BIOL 115; open to advanced undergraduates. Biology and classification of marine and freshwater fish; emphasis on identification and collecting. Lecture and laboratory to be taken during same semester.

**BIOL 534 Ichthyology Laboratory.** (1 Hour) Prerequisites: BIO 115, BIOL 115. Must be taken with lecture in BIO 534. Field collecting, sorting, preserving, classification of marine fish; emphasis on identification.

**\*BIO 539 Marine Microbiology.** (3 Hours) Prerequisites: BIO 313, BIOL 313, 416, and BIOL 416. Open to advanced undergraduates. A survey of the most important marine microorganisms; emphasis on bacteria, sampling techniques, enumeration of indicator organisms, isolation of pathogenic organisms from seafood. Lecture and laboratory to be taken during same semester.

**\*BIOL 539 Marine Microbiology Laboratory.** (1 Hour) Prerequisites: BIO 313, 416. Must be taken with lectures in BIO 539. Techniques in sampling, isolation, culture and enumeration of pathogenic and nonpathogenic marine microorganisms.

**BIO 540 Cell Biology.** (3 Hours) Prerequisites: BIO 111, 119 or 121, 313, and CHEM 241. Study of cell and function. Emphasis on bioenergetics, cell metabolism, cell signaling and current cell research.

**BIOL 540 Cell Biology Laboratory.** (1 Hour) Prerequisites: BIO 112, 119, 313. Must be taken concurrently with BIO 540. Laboratory activities, which develop techniques for isolation of cellular proteins, gene expression and quantitative analyses of biomolecules.

**BIO 544 Arthropod Disease.** (3 Hours) Prerequisites: BIO 115, 427. Emphasis is given to the control and prevention of insect and other arthropod borne diseases, the physiology, taxonomy, life cycles and ecology of important vectors.

**BIOL 544 Arthropod Disease Laboratory.** (1 Hour) Study the external structure and make outline sketches to indicate the characteristics used in classification of representative forms and unknown specimens of organisms important to medicine and veterinary science.

**BIO 546 Selected Topics in Marine and Environmental Studies.** (1-2 Hours) Prerequisites: None; open to advanced undergraduates or others on consent of instructor. Lectures on a broad range of marine and environmental topics of general interest having special application to students in both marine sciences program. No separate laboratory.

**\*BIO 547 Introduction to Oceanography.** (3 Hours) Prerequisites: BIO 407, BIOL 407. CHEM 254 and CHML 254, or consent of instructor; open to advanced undergraduates. Broad view of the marine world, geological, geographical, chemical, physical and biological; field trips aboard research vessels and laboratories introducing applied uses of oceanographic gear, instruments and sampling techniques. Lecture and laboratory to be taken during same semester.

**\*BIOL 547 Introduction to Oceanography Laboratory.** (1 Hour) Prerequisite: Must be taken with

lectures in BIO 547. Introduction to oceanographic gear, its application methodology and sampling techniques; field work in practical applications.

**BIO 550 Immunology and Serology.** (3 Hours) The study of antibodies that are elicited in response to antigens and the difference between the protoplasm of one organism and another as reflected in the blood.

**BIOL 550 Immunology and Serology Laboratory.** (1 hour) Prerequisite: BIO 313 Experimental application of immunology and serology in diagnosis of microbial diseases In vitro and in vivo techniques in immune response will be investigated.

**BIO 553 Tropical Marine Ecology** (3 hours) Opportunity for practical field exercises in selected tropical environments.

**BIO 570 Human Physiology.** (3 Hours) Prerequisites: BIO 115, CHEM 242. The study of physiological processes related to the human. The physiological systems to be examined are: gastro-intestinal, renal, endocrine, neural, and reproductive.

**BIOL 570 Human Physiology Laboratory.** (1 Hour) Selected studies of the physiological processes of mammals with emphasis on man. Must be taken concurrently with Bio 570.

**BIO 575 Endocrinology.** (3 Hours) Prerequisites: BIO 115, 218; CHEM 142, 242. The basic fundamentals of endocrinology. The role of the endocrine glands and their products (hormones) in the maintenance of a constant internal environment in living organisms.

**BIOL 575 Endocrinology Laboratory.** (1 Hour) Prerequisites: BIO 115, 218; CHEM 142, 242. Must be taken concurrently with BIO 575, or with the consent of the instructor. Experimental analysis of normal and abnormal endocrine functions. Emphasis is placed on basic laboratory techniques employed in the study of endocrine function.

**BIO 576 Histopathology.** (3 Hours) Prerequisites: BIO 115, 218, and 441. Provides general consideration of the principal concepts of tissues and cellular pathology, with emphasis on human tissues and pathology. The course prepares students for further studies in medicine, dentistry, and allied health fields.

**BIOL 576 Histopathology Laboratory.** (1 Hour) Exercises studying gross and microscopic diseased tissues and clinical cases.

**BIO 580 Limnology** (3 hours) Physical and chemical factors affecting the biology of ponds, reservoirs, and streams is presented. A research project in limnology will be required.

**BIOL 580 Limnology Lab.** (1 hour) Both chemical and biological monitoring of aquatic systems will be explored. Hack kits, conductivity meters, and oxygen probes, BOD's, COD's and map surveys will be utilized.

**BIO 587 Independent Study.** (2 hours for M.S. students) Prerequisite: Graduate standing in biology. Students will elect a specific topic that is not covered in other biology courses. The student, working independently, will be required to submit a research paper that includes an exhaustive review of literature.

**BIO 589 Graduate Seminar.** (1 hour for M.S. students) A course designed for survey of biological literature. The student will be required to prepare and

present reports and assigned projects. Required of all students.

**BIO 590 Reproductive Physiology.** (3 Hours) Prerequisites: BIO 115, CHEM 142, 242. Some prerequisites may be waived with approval of instructor. An advanced assessment of the physiology metabolism and histology of the reproductive system. The etiology of abnormal functions will be presented.

**BIOL 590 Reproductive Physiology Laboratory.** (1 Hour) Prerequisites: BIO 112, 218, CHEM 142, 242. Must be taken concurrently with Bio 590 or with consent of instructor. Experimental analyses of the Mammalian reproductive system. Emphasis is placed on basic methodologies employed in anatomical and physiological studies of the reproductive system.

**BIO 591 Advanced Developmental Biology.** (3 Hours) Prerequisites: BIO 112, CHEM 242. Current experimental findings in the field of developmental biology will be presented. Theories on the mechanisms regulating differentiation and abnormal growth pattern will be discussed.

**'BIOL 591 Advanced Developmental Biology Laboratory.** (1 Hour) Advanced laboratory techniques in the field of developmental biology will be presented and analyzed.

**BIO 599 Thesis Research.** (required for M.S. students) (6 Hours) Thesis representing original research.

**BIO 600 Graduate Seminar** Advanced topics investigated are presented by students. The student will be required to prepare and present reports and assigned projects. Required of all students.

**BIO 601 Environmental Science Seminar** Advanced topics of special interest, current research, field trips, demonstrations, and guest lectures in the areas of environmental science, limnology, ecology, water and air pollution, populations, solar energy, earth resources, and others.

**BIO 602 Environmental Science Special Problems** (4 hours) Each student will select an aspect of the environment beyond the limits of the campus. The student will define the problem, analyze it, and report on his findings and possible solutions. This problem will sometimes include on the job training with an environmental agency.

**BIO 609 Advanced Genetics.** (4 Hours) Prerequisite: BIO 509. Provides detailed considerations of genetic analysis, quantitative inheritance, chromosomal engineering and some concepts in genetics.

**BIO 610 Environmental Microbiology** (3 hours) The study of the roles of microorganisms in natural systems with attention given to the examination of nutrient cycles, methods of analysis of microbial biomass and activities as well as the functional roles of microorganisms.

**BIOL 610 Environmental Microbiology Lab.** (1 hour) Laboratory is designed to acquaint students with modern techniques for measuring microbial biomass and microbial degradative activities of natural and xenobiotic chemicals in natural environments. Specific projects of microbial analysis will be assigned to students.

**BIO 615 Principles of Bioremediation** (3 Hours) This course uses modern knowledge in life sciences, as well as new developments in biotechnology to address important issues related to environmental cleanup of hazardous wastes. The nature of environmental pollution is reviewed, and basic concepts in molecular biology, biochemistry, and microbiology and plant physiology are applied to demonstrate the significance of bioremediation and phytoremediation in pollution control. Therefore, an emphasis is put on the use of biological methods and processes for the remediation of contaminated soils and water resources.

**BIOL 615 Principles of Bioremediation** (1 Hour) Laboratory and field experiments conducted to familiarize students and methodologies. Identification and classification of microorganisms' use of bacteria in toxicity assessment, biodegradation of organic contaminants, and phytoremediation of toxic metals are discussed.

**BIO 617 / BIOL 617 Introduction to Remote Sensing for Environmental Science.** (4 hours) Prerequisites: PHY 201, 202, MATH 111, 115, 231. This course introduces the theory and techniques of remote sensing and their application to environmental analysis. Topics include the concepts of remote sensing; characteristics of spectromagnetic waves; types of remotely sensed data; sensor types; the theory of photogrammetric techniques; digital image analysis for acquisition of geographical information. Several lab activities involve: learning of basics of ERDAS Imagine; data acquisition through Internet search for satellite images; importing datasets, band characteristics & visual presentation.

**BIO 618 Application of Remote Sensing in Environmental Science.** (3 hours) Prerequisite: BIO 617) This course covers the quantitative and applied aspects and analysis of remotely sensed digital data. This course is designed to provide an understanding of digital image processing, analysis, and interpretation techniques. Topics include digital data visualization; geometric, radiometric, and atmospheric correction; image enhancement and manipulation; information extraction; digital change detection; integration of GIS and remotely sensed data, and spatial modeling. Laboratory exercises are in-depth applications of the exercise topics that were covered in BIO 617 as well as thematic information extraction and change detection.

**BIO 620 Independent Study** Students will elect a specific topic that is not covered in other biology courses. The student, working independently, will be required to submit a research paper that includes an exhaustive review of literature.

**BIO 621 Advanced Plant Morphology.** (4 Hours) Prerequisite: BIO 521. Analysis and morphology of vascular plants ranging from pteridophyta through angiosperms with phylogenetic considerations.

**BIO 650 Analysis of Hormone Action.** (3 Hours) Prerequisite: Graduate status and consent of the instructor. An analysis of the cellular mechanisms of hormone action. The role of target tissues, receptors, hormone analogs and, metabolic inhibitors in studies of hormone action will be discussed.



*\*These courses (or close equivalents) also may be taken during summers at the Gulf Coast Research Laboratory, Ocean Springs, Mississippi; Dauphin Island Sea Laboratory, Alabama, or other coastal teaching/research laboratory for credit at JSU subject to approval on individual basis by JSU administration and coastal laboratory administrators.*

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**Doctor of Philosophy  
ENVIRONMENTAL SCIENCE**

Dr. Paul Tchounwou, Presidential Distinguished  
Professor and Director

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**Faculty**

(Interdisciplinary, listed by their Primary Department)

Biology:

Dr. H. Ahmad, Professor  
Dr. M. T. Begonia, Professor  
Dr. I. Farah, Professor  
Dr. C. Howard, Professor  
Dr. H-C. Huang, Assistant Professor  
Dr. R. Kafoury, Associate Professor  
Dr. R. Kulawardhana, Assistant Professor  
Dr. A. Mohamed, Professor Emeritus  
Dr. F. Noubissi, Assistant Professor  
Dr. A. Patolla, Assistant Professor  
Dr. J. Stevens, Professor  
Dr. C. Yedjou, Associate Professor

Chemistry, Physics and Atmospheric Sciences:

Dr. M. Fadavi, Professor  
Dr. A. Hamme, Professor  
Dr. F. Han, Professor  
Dr. A. Hossain, Professor  
Dr. S. Islam, Assistant Professor  
Dr. J. Leszczynski, Presidential Distinguished  
Professor

Dr. Y. Liu, Professor  
Dr. D. Lu, Associate Professor  
Dr. P. Ray, Professor  
Dr. S. Reddy, Associate Professor

Civil and Environmental Engineering and Industrial  
Systems and Technology:

Dr. K. Ali, Professor  
Dr. F. Amini, Professor  
Dr. Y. Li, Associate Professor  
Dr. R. Whalin, Professor

Electrical and Computer Engineering, and Computer  
Science:

Dr. N. Meghanathan, Professor  
Dr. M. Manzoul, Professor

Mathematics and Statistical Sciences:

Dr. T. Kwembe, Professor  
Urban and Regional Planning  
Dr. B. Herbert, Associate Professor  
Dr. E. Merem, Professor

**Program Mission**

To produce highly skilled environmental scholars who in turn will provide for policy makers and the general public, scientific and factual information derived from laboratory and field applied research encompassing basic sciences, engineering and technology. As such, it is related to the assessment of water contamination, food contamination, air pollution, global warming, toxic and hazardous substances releases and associated environmental issues; and the development of cost-effective methodologies and strategies to protect the environment and human health.

**Program Objectives**

1. To provide graduate students with essential knowledge, skills and aptitudes needed for successful careers in environmental science related jobs at various institutions including government agencies, academia and the environmental industry.
2. To protect the environment and human health by educating and training students on the interactions between the various components/systems of the environment, the complex and fragile nature of the environment, and how to sustain ecosystem integrity and protect human health.
3. To establish applied environmental science research initiatives that will lead to an authoritative base of knowledge concerning the State of Mississippi's environment and natural resources; by assessing and understanding the mechanisms by which physical, chemical, and biological agents generated by nature may cause alterations of ecosystem integrity, disability and diseases in man and other life forms.
4. To develop and understand cost-effective methodologies and means whereby the

impact of various environmental pollutants may be prevented and/or controlled, and to integrate important knowledge and technologies in the physical, chemical, biological and social sciences needed to set policies and guidelines for appropriate utilization and management of vital resources.

5. To render services to the community through outreach programs, technology transfer for the protection of natural resources and the development of the economy, and communication to convey environmental science education to the public.

### **Admission Requirements**

Admission to the doctoral program in Environmental Science is open to persons holding the master's degree in science, technology, engineering, or agriculture; demonstrated satisfactory performance on the Graduate Record Examination (GRE), and the Test of English as Foreign Language (TOEFL) for international students; and acceptable academic records.

All students seeking admission to this Ph.D. Program must meet the following criteria:

1. A Master's degree in natural sciences or related sciences from an accredited university. *An applicant with a Bachelor's degree only may be admitted when that student shows exceptional potential as determined by a GPA of 3.35 or better, a satisfactory GRE, and extraordinary work experience.*
2. A completed program application submitted to the Graduate School,
3. An official score on the Graduate Record Examination (GRE),
4. An overall GPA of 3.00 or above (on a 4.0 scale) on the highest earned degree,
5. Transcripts for all post secondary and graduate work attempted prior to a program application,
6. Recommendations from three major graduate professor's knowledgeable of the applicant's professional academic ability, job experiences, and leadership and research potential,
7. Acceptable evidence of a student's writing ability as determined by a writing sample,
8. A satisfactory TOEFL score for international students,
9. A successful interview with the program screening committee, and,
10. Recommendation for admission by the program screening committee.

All applications received are reviewed by a standing Environmental Science Doctoral Advisory Committee that recommends acceptance or denial of admission to the Graduate School. The Graduate School officially

informs the prospective student of its decision for the University.

### **Transfer Credits**

A maximum number of nine credit hours can be transferred into the Program. Courses for which transfer credits are sought must be at least 700-Level; must have been completed with a grade of B or better; and must be approved by the student's Advisory Committee, the Environmental Science Advisory Committee, the Dean of the College of Science, Engineering and Technology, and the Dean of the Division of Graduate Studies. Credit for thesis or dissertation research as well as "internship" course work in any form is not transferable.

### **Time Limit**

No student will be granted a doctoral degree unless all requirements are completed within a period of ten (10) consecutive calendar years from the time of admission to the program.

### **Financial Aid**

Graduate research and teaching assistantships are available on a competitive basis to highly qualified students.

### **Residence**

Students are required to spend one academic year in resident study on the campus. One academic year may include two adjacent regular semesters or one regular semester and one adjacent summer session. To satisfy the continuous residence requirement, the student must complete a minimum of eighteen (18) hours for the required period.

### **Candidacy Requirements**

To be admitted to candidacy for the doctoral degree, a student must have:

1. Completed the formal coursework with a GPA of 3.0 or better.
2. Passed the Comprehensive Examination.
3. Filed with the Dean of the Graduate School, the dissertation proposal approved by the student's Advisory Committee, the Program Director and the Academic College Dean.

### **Degree Requirements**

The program requires approximately two years of course work (40 semester hours) and a minimum of twenty (20) semester hours of dissertation research credit beyond the MS degree. The student's graduate committee will determine the exact program of study.

Additional requirements include:

1. Satisfactory performance on the Comprehensive Examination administered after the student has completed all course work; and,
2. Successful defense of the dissertation research. The final basis for granting the degree shall be the candidate's grasp of the subject matter in a specialized area of

environmental science, and a demonstrated ability to express thoughts clearly and forcefully in both oral and written languages.

ENV 802	Environmental Physiology	4
ENV 803	Wetland Ecology	4
ENV 805	Medical Geology	3
ENV 830	Environmental Microbiology	4

The minimum total semester hours required for the doctoral degree is 60.

### Required Courses

Course	Title	Semester Hours
ENV 700	Environmental Systems	3
ENV 701	Environmental Chemistry	4
ENV 702	Environmental Health	3
ENV 711	Applied Environmental Biostatistics	3
ENV 751	Water Quality Management	3
ENV 755	Air Quality Management	3
ENV 800	Environmental Toxicology	4
ENV 801	Risk Assessment and Management	3
ENV 900	Environmental Science Seminar	2
ENV 999	Dissertation Research	20
<b>Total Hours</b>		<b>48</b>

In addition to the required courses shown above, the student must complete a minimum of 12 semester hours selected from the elective courses listed below. Other electives in biological sciences, physical sciences, engineering, technology, and public policy will be added as developed.

### Elective Courses

Course	Title	Semester Hours
CSC 700	Computer modeling	3
CSC 800	Image Interpretation	3
MATH 700	Statistics and Experimental Design	3
MET 800	Environmental Meteorology	3
ENV 715	Principles of Bioremediation	4
ENV 717	Introduction to Remote Sensing for Environmental Science	3
ENV 718	Application of Remote Sensing in Environmental Science	3
ENV 720	Environmental and Occupational Health	3
ENV 721	Solid Waste Management	3
ENV 780	Environmental Epidemiology	3

### DESCRIPTION OF COURSES

**ENV 700 Environmental Systems.** (3 hours). Groundwork of environmental science, environmental awareness and ecological literacy for the incoming Ph.D. students is presented. The environment and its living and non-living components, and the interactions of these component areas studied. The course is set in a thermodynamic perspective and is based on a nested hierarchy of systems. Key concepts and principles that govern how we think the environment works are presented while learning how to apply these concepts to possible solutions of various environmental degradation, pollution and resource problems.

**ENV 701 Environmental Chemistry.** (3 hours). Prerequisites: One year of general Chemistry and one year of organic chemistry. Studies of the basic concepts of environmental chemistry; the nature of chemical compounds; organic and inorganic; chemical reactions; their effects, and fate of chemical species, in aquatic systems. This includes: Studies of equilibrium phenomena of acids, bases, salts, complex compounds, and oxidation/reduction reactions. Studies of water pollution, environmental chemistry of water and its properties.

**ENVL 701 Environmental Chemistry** (1 hour). Experiments done for the purpose of water quality control and assessment, such as the determination of alkalinity, acidity, water hardness, biochemical oxygen demand (BOD), and other important parameters. The laboratory is coordinated to go with the lecture material.

**ENV 702 Environmental Health.** (3 hours). This course focuses on the impact of environmental problems on human health. Health issues related to water pollution/contamination by physical, chemical and biological agents; wastewater discharges; radiations; air pollution; municipal, and industrial wastes; food contamination; pesticides; occupational hazards; and vector-borne diseases are discussed.

**ENV 711 Applied Environmental Biostatistics.** (3 hours) Prerequisite: Biostatistics (Bio 511) or equivalent. This course is designed as an applied, advanced biostatistics course for students in the Environmental Science Ph.D. Program. Students will learn how to apply important concepts and principles of environmental biostatistics in the conduct of their research, from the initial designing of experiments to proper data collection and analysis, inferences, interpretation of results in applied terms, reporting and presentation of the results. The statistical computer

software (SAS) will be used to analyze and interpret results.

**ENV 751 Water Quality Management.** (3 hours). This course provides students with basic concepts and principles in Water Quality Management. The effects of organic, inorganic, biological and thermal pollutants/contaminants in various systems of the hydrologic cycle including streams, reservoirs, and estuaries; eutrophication; water quality criteria and standards; monitoring concepts; methods in water quality management; regulatory considerations; and non point source pollution control, are discussed.

**ENV 755 Air Quality Management.** (3 hours). This course provides students with basic concepts and principles of air quality management. Contaminant classification, pollutant sources, criteria pollutants, health effects, exposure and risk assessment are discussed. Pollutant measurements and air quality assessment techniques are considered with regard to atmospheric effects on dispersion and transport. Identification of, and control strategies for, stationary and mobile sources, and environmental regulations are studied, and indoor air quality considered.

**ENV 800 Environmental Toxicology.** (3 hours). Prerequisites: ENV 701, ENV 702. This course is designed to provide an overview of the basic principles and concepts of toxicology including: exposure characterization, dose-response relationship, kinetics and distribution of toxicants in a biological system; to understand the fate, behavior and toxicities of xenobiotic chemicals, and the mechanisms by which they affect cells and organs; and to identify the sources and discuss the effects of various groups of environmental toxicants including heavy metals, pesticides and other industrial byproducts.

**ENVL 800 Environmental Toxicology Lab.** (1 hour). This course is designed to familiarize the students with important laboratory and field procedures and methods used in toxicological testing of environmental toxicants; and to discuss the strengths and weaknesses of major methodologies including acute, sub acute, sub chronic and chronic bioassays.

**ENV 801 Risk Assessment and Management.** (3 hours). Prerequisites: ENV 800, MATH 700. This course is designed to provide students with qualitative and quantitative skills necessary to evaluate the probability of injury, disease and death in humans and other life forms, from exposure to various environmental contaminants. Hazard identification, exposure assessment, dose-response evaluation and risk characterization are emphasized. Regulatory and technical aspects of risk assessment in the promulgation of public and environmental safety standards are discussed.

**ENV 900 Seminar.** (0.5 hr. x 4 semesters = 2 Hours) (Lecture). This course focuses on contemporary issues in environmental health science. The student is expected to review, discuss, and present orally a report on a topic related to contemporary environmental issues. Topic areas for selection include (but not limited to): environmental biology, environmental chemistry, environmental microbiology, environmental

toxicology, atmospheric science, water quality management, solid and hazardous waste management, computer modeling and remote sensing. Students are required to attend all scheduled seminars.

**ENV 999 Dissertation Research.** (20 hours). Original research in one of several sub disciplines in Environmental Science. Credit per academic session allowable is 1-6 hours. Student must produce, present and defend a document of publication quality.

#### Elective Courses

**CSC 700 Computer Modeling.** (3 hours). The purpose of this course is to provide the student with the fundamental knowledge of simulation models, writing programs to generate random numbers from various probability distributions using differential methods, and testing the statistical properties of random number generators. The student will also be trained to write simple programs to simulate real life situation models using GPSS language.

**CSC 800 Image Interpretation.** (3 hours). This course presents a broad overview of various image processing concepts and techniques. Topics include the history of remote sensing, image digitation, data formats, hardware and software functions, commercial and public available digital processing systems, image preprocessing (radiometric and geometric correction), image enhancement, image classification, change detection, interfaces of remote sensing and geographical information system (GIS), and the future of digital image processing.

**MATH 700 Statistics and Experimental Design.** (3 hours) Prerequisite: MATH 272, or 2 semesters of Introductory Statistics. Probability; random variables; expectation of a function of random variables; sampling distribution; estimation; hypothesis testing; designed experiments; completely randomized design; randomized complete block design; Latin square design; factorial experiments; statistical software application to statistical analysis, are discussed.

**MET 801 Environmental Meteorology.** (3 hours). Principles of atmospheric science as applied to Gaussian modeling of pollutants. Includes source review and receptor identification and modeling, National Ambient Air Quality Standards and human health and welfare impacts, plume behavior, and access of EPA models, running of EPASCREEN, and web site information. Special topics covered include: scavenging; acid precipitation; weather modification, green house enhancement; stratospheric ozone; scrubbers; and indoor air quality.

**ENV 715 Principles of Bioremediation.** (3 hours). This course uses modern knowledge in life sciences, as well as new developments in biotechnology to address important issues related to environmental cleanup of hazardous wastes. The nature of environmental pollution is reviewed, and basic concepts in molecular biology, biochemistry, microbiology, and plant physiology are applied to demonstrate the significance of bioremediation and phytoremediation in pollution control. Therefore, an emphasis is put on the use of biological methods and processes for the remediation of contaminated soils and water resources.

**ENVL 715 Principles of Bioremediation.** (1 hour). Laboratory and field experiments conducted to familiarize students with relevant bioremediation techniques and methodologies. Identification and classification of microorganisms' use of bacteria in toxicity assessment, biodegradation of organic contaminants, and phytoremediation of toxic metals are discussed.

**ENV 717 Introduction to Remote Sensing for Environmental Science (3 hours).** This course introduces the theory and techniques of remote sensing and their application to environmental analysis. Topics include the concepts of remote sensing; characteristics of spectro-magnetic waves; types of remotely sensed data; sensor types; the theory of photogrammetric techniques; digital image analysis for acquisition of geographical information. Several lab activities involve: learning of basics of ERDAS Imagine; data acquisition through Internet search for satellite images; importing datasets, band characteristics and visual presentation.

**ENV 718 Application of Remote Sensing in Environmental Science (3 hours).** Prerequisite: ENV 717. This course covers the quantitative and applied aspects and analysis of remotely sensed digital data. It is designed to provide an understanding of digital image processing, analysis, and interpretation techniques. Topics include digital data visualization; geometric, radiometric, and atmospheric correction; image enhancement and manipulation; information extraction; digital change detection; integration of GIS and remotely sensed data, and spatial modeling. Laboratory exercises are in-depth applications of the exercise topics that have been covered in ENV 717, as well as thematic information extraction and change detection.

**ENV 720 Environmental and Occupational Health.** (3 hours). This course explores the relationship and impact of the environment to health and illness in human populations. An exploration of man-made and natural environmental hazards will be discussed. Environmental health and risk assessment will be discussed as well as interventions. Environmental policy and practices will be viewed from the public health perspective and include the study of energy, waste, environmental justice, and regulation.

**ENV 721 Solid Waste Management.** (3 hours). This course emphasizes on waste control methodologies for both municipal and industrial wastes including hazardous and nonhazardous waste under the Resource Conservation and Recovery Act (RCRA). The students are familiarized with environmental legislation regulating these wastes at state and federal levels. A thorough review is done on waste handling, transport, treatment technologies including chemical, physical, biological and thermal treatments, and disposal options such as land disposal of wastes. Waste minimization techniques such as source reduction and recycling are also discussed.

**ENV 780 Environmental Epidemiology.** (3 hours) This course is designed to provide students with the basic knowledge and skills required to develop and

apply epidemiologic principles and concepts to the study of adverse effects of various environmental factors on both human and ecological health. Emphasis is put on the study of the health effects of physical, chemical and biologic factors in the external environment, broadly conceived from the epidemiologic point of view. As such, it enables students to interpret epidemiological data and understand the approaches used in the epidemiologic investigations of acute and chronic diseases. The course also covers the basic methods and issues involved in epidemiologic investigation of disease conditions in human populations.

**ENV 802 Environmental Physiology.** (3 hours). This course provides students the basic concepts of homeostasis and adaptation to the environment. Discussions are designed to provide an understanding of the physiological responses to various types of pollutants in the different environmental systems including aerospace, hyperbaric, marine and terrestrial environments. Emphasis is placed on homeostatic responses at cellular, organ and organ system levels to various environmental stresses.

**ENVL 802 Environmental Physiology Lab.** (1 hour). Laboratory exercises are performed to introduce students to instrumental techniques necessary in the understanding of homeostatic regulatory mechanisms that permit adaptation of organisms to varied and peculiar habitats.

**ENV 803 Wetland Ecology.** (3 hours). This course is designed to provide scientific knowledge for a better understanding of interactions between biological, physical and chemical components of wetlands. The structure and function of various types of wetlands; their biodiversity, biogeochemistry, and the impact of pollution on their ecological characteristics are discussed. Discussions are also done on how constructed wetlands can be used as water quality enhancers.

**ENVL 803 Wetland Ecology Lab.** (1 hour). Emphasis is placed on field works designed to evaluate the physical, chemical and biological characteristics of wetlands.

**ENV 805 Medical Geology.** (3 hours). This course is designed to provide students with qualitative and quantitative skills necessary to examine and understand the impacts of the natural geologic materials and processes on the prevalence, incidence and distribution of human (and other animal) diseases. The course focuses on the understanding of the nature and behavior of geological factors, and the examination of their impacts on health. Hence, the course will encompass major local, national and global health issues impacted by geological materials and/or processes. It will also encompass the interactions between human activities, geological factors, environment and health, as well as the innovative technologies that are used for the characterization and impact assessment of geologic materials on health.

**ENV 830 Environmental Microbiology.** (3 hours). The general objective of this course is to study the roles of microorganisms in natural ecosystems. Attention is

given to the examination of nutrient cycles, methods of analysis of microbial biomass and activities, and the functional roles of microorganisms. In addition, this course offers in-depth examination of the role of microbial processes related to environmental deterioration, its control and remediation, and ultimately its prevention.

**ENVL 830 Environmental Microbiology Lab.** (1 hour). Laboratory designed to acquaint students with modern techniques for measuring microbial biomass and microbial degradative activities of natural and xenobiotic chemicals in natural environments. Specific projects of microbial analysis will be assigned to students.

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**DEPARTMENT OF CHEMISTRY,  
PHYSICS AND ATMOSPHERIC  
SCIENCES**

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**Faculty**

Dr. N. Campbell, Associate Professor  
Dr. Q. Dai, Assistant Professor  
Dr. M. Fadavi, Professor  
Dr. S. Goupalov, Associate Professor  
Dr. A. Hamme, Professor  
Dr. F. Han, Professor  
Dr. E. Heydari, Professor  
Dr. G. Hill, Professor  
Dr. Md. Hossain, Professor  
Dr. M. Huang, Professor  
Dr. M. Islam, Assistant Professor  
Dr. K. Lee, Professor  
Dr. J. Leszczynski, Presidential Distinguished Professor  
Dr. Y. Liu, Professor  
Dr. D. Lu, Associate Professor  
Dr. I. Ogungbe, Associate Professor  
Dr. N. Pradhan, Assistant Professor  
Dr. P. Ray, Professor  
Dr. S. R. Reddy, Associate Professor  
Dr. T. Shahbazyan, Professor  
Dr. H. Tachikawa, Professor Emeritus  
Dr. J. D. Watts, Professor  
Dr. L. White, Associate Professor  
Dr. S. Yang, Assistant Professor  
Dr. J. Zhou, Assistant Professor

**Program Description**

The Department of Chemistry, Physics and Atmospheric Sciences offers both a Doctor of Philosophy (Ph.D.) and a Master of Science (M.S.) degree in Chemistry, and Master of Science Teaching (MST). The Ph.D. degree in chemistry requires evidences of high quality scientific research leading to peer-reviewed publications with classroom teaching, laboratory supervising, and proposal and manuscript writing experiences. The program covers all modern areas of chemistry including analytical, biochemistry, computational, environmental, inorganic, organic, and physical chemistry, as well as interdisciplinary areas in material, energy, environmental, and biomedical research. The intensive graduate training includes formal lecture courses, hands-on laboratory and theoretical research experiences, teaching experiences, independent proposal development, preparation of manuscripts and preparation of research thesis/dissertation for publication.

### Program Mission

The Department of Chemistry, Physics and Atmospheric Sciences aims at a comprehensive graduate education in all areas of modern chemistry and related fields for a diverse student body. These programs aim for national and international distinction and produce high quality chemists for education institutions, governmental agencies, and industrial and business entities.

### Program Objectives

- To provide the best education and career opportunity for students from the underrepresented minority groups with a nurturing environment conducive to learning and scholarly activities.
- To provide opportunities in which students can develop methods of independent and systematic investigations leading to scientific discoveries.
- To prepare students for a successful career at academic institutions, industrial and business entities, and governmental agencies.
- To promote professional development and growth of the faculty.

### Time Limits

For full-time students working toward an **M.S. degree**, the degree requirements should be completed by the end of the second year following the first semester of study. Students beyond their second year of full-time study will be reviewed by their Graduate Advisory Committee for satisfactory progress every semester. A report of unsatisfactory will result in dismissal from the program. Under special circumstances, MS students must graduate in three years in fulltime status. Part time students are considered separately.

For full-time students working toward a **Ph.D. degree**, we recommend that the final defense be completed within five years. Under special circumstances, Ph.D. students must graduate in eight years in fulltime status. Part time students are considered separately. Students beyond their fifth year of full-time study will be reviewed by their Graduate Advisory Committee for satisfactory progress every semester. A report of unsatisfactory will result in dismissal from the program. The student will be allowed to apply for a Master's degree in this case.

### Doctoral Program in Chemistry

#### Admission Requirements

In addition to the requirements of the Division of Graduate Studies, applicants must have the following:

1. A B.S. degree in chemistry or a closely related field with passing grades 'C' or better for the following courses with labs:
  - 2 semesters of General Chemistry
  - 2 semesters of Organic Chemistry
  - 1 semester of Analytical Chemistry
  - 1 semester of Physical Chemistry
  - 1 semester of Inorganic Chemistry

2. GRE Score\*
3. Three Letters of Recommendation
4. A Statement of Purpose for Graduate Study

### Retention Requirements

In addition to satisfying the basic requirements of the Division of Graduate Studies, students are required to maintain a chemistry GPA of 3.00 or higher every semester. Seminar courses, dissertation courses, and other non-chemistry elective courses are excluded from the calculation of the chemistry GPA. Students whose chemistry GPA is below 3.00 will be placed on probation for up to one year to fix the deficiencies.

### Repeating a Course

If a student receives a grade of "C" or lower in a chemistry core course or a course in the student's major field of study, that course must be retaken and the student must earn a grade of "B" or better.

### Degree Candidacy Requirements

After completing the lecture and seminar course requirements, students need to take and pass the comprehensive examination and defend an independent research proposal in order to become an official Ph.D. candidate. The comprehensive examination of 3 subjects must be taken and passed during the second year of study and the written independent research proposal must be prepared and defended during the third year of study or at least one year before graduation.

### Graduation Requirements

The minimum number of credit hours for the Ph.D. degree in Chemistry is 60 credit hours.

- A minimum of 18 credit hours from graduate chemistry lecture courses
- 2 credit hours for Seminars
- 40 credit hours for Dissertation Research
- Teach four semesters of undergraduate courses as a teaching assistant.
- Pass Area Comprehensive Examination in three subject areas.
- Write and defend an Independent Research Proposal.
- Defend the dissertation before the Dissertation Committee and public audience.
- Submit an approved dissertation to the Division of Graduate Studies with one copy to the Department and one to the University Library

The 18 credit hours of lecture courses must include at least three out of the following five core courses for a total of at least 9 credit hours:

CHEM 723	Advanced Analytical Chemistry
CHEM 731	Advanced Biochemistry
CHEM 736	Physical Organic Chemistry
CHEM 741	Advanced Inorganic Chemistry
CHEM 758	Quantum Chemistry

### **Students entering the Ph.D. Program With a M.S. Degree in Chemistry**

Students, who earned a M.S. degree from another institution, are allowed to transfer up to four (4) lecture courses or 12 credit hours if these courses are equivalent to the JSU chemistry doctoral courses. Students who earned a M.S. degree from JSU will be required to take at least two more approved lecture courses instead of the required six lecture courses. Other requirements are the same as for those entering the Ph.D. program with a B.S. degree.

### **Master's Program in Chemistry Admission Requirements**

In addition to the requirements of the Division of Graduate Studies, applicants must have the following:

1. A B.S. degree in chemistry or a closely related field with passing grade ("C" or better) in the following courses with labs  
2 semesters of General Chemistry  
2 semesters of Organic Chemistry  
1 semester of Analytical Chemistry  
1 semester of Physical Chemistry  
1 semester of Inorganic Chemistry
2. Three Letters of Recommendation
3. A Statement of Purpose for Graduate Study
4. GRE Score

### **Retention Requirements**

In addition to satisfying the basic requirements of the Division of Graduate Studies, students are required to maintain a chemistry GPA of 3.00 or higher every semester. Seminar courses, dissertation courses, and other non-chemistry elective courses are excluded from the calculation of the chemistry GPA. Students whose chemistry GPA is below 3.00 will be placed on probation for up to one year to fix the deficiencies.

### **Degree Requirements**

A student pursuing a M.S. degree in Chemistry is required to complete a minimum of 30 credit hours with a written thesis in Chemistry.

1. Within the 18 credit hours of lecture courses, students must complete at least three (3) of five (5) core courses for a total of nine (9) hour and two semesters of seminar for one (1) credit hour. The core courses are:

CHEM 523 Advanced Analytical Chemistry  
CHEM 541 Advanced Inorganic Chemistry  
CHEM 531 Biochemistry  
CHEM 558 Quantum Chemistry  
CHEM 536 Physical Organic Chemistry

2. Students will fulfill the remaining 11 hours from Chemistry electives with no more than 11 hours in CHEM 580-Thesis Research. It is possible to take some courses in related fields upon recommendation of the advisor.

3. Pass the Graduate Area Comprehensive Examination in three chemistry areas.
4. The student must participate as a teaching assistant in the chemistry department for at least two semesters.
5. Defend a thesis before the Thesis Committee and public audience.
6. Submit an approved thesis to the Division of Graduate Studies with one copy to the Department and one to the University Library

### **Non-Thesis Master's Degree**

Ph.D. students who fulfill the following requirements will be awarded a Non-Thesis Master's degree in Chemistry, if the student applies and wishes to continue to finish the doctorate degree.

1. A minimum of 36 credit hours, including at least 18 hours of approved graduate level lecture courses and two hours of seminar with a GPA of 3.00 or better. The graduate lecture courses should include at least three of the five core courses: Advanced Analytical Chemistry, Advanced Inorganic Chemistry, Biochemistry, Quantum Chemistry, and Physical Organic Chemistry.
2. Pass the Graduate Area Comprehensive Examination.
3. Pass an oral defense covering the student's research before a committee of four faculty members. The quality of research should be at or above the level of a MS thesis.

### **Master of Science in Teaching**

The Department of Chemistry, Physics and Atmospheric Sciences has the major teacher training responsibility in the College of Science, Engineering, and Technology. This program leads to the (MST) degree in Science Education with a concentration in one of the following areas: (Biology, Chemistry, General Science, Physics and Physical Science). The Department also offers for credit graduate science education and science content courses for graduate students of other programs. Several courses are offered for in-service teachers and other educators for professional development. These courses are often used toward certification and further degrees.

### **Accreditation**

This program was accredited by the National Council for Accreditation of Teacher Education (NCATE). Currently the Department is in the process of renewing the accreditation of the program.

### **Program Objectives**

1. To provide additional preparation for science teachers and science supervisors in scientific content and supervision techniques.



- To enable teachers of science to gain insight into the kinds of science experience that is relevant to the needs of today's youth.
- To develop in-science teachers an awareness of the modern trends and problems in science teaching.
- To enrich current and potential science teachers and educators with content and pedagogy in science and science education areas.
- To offer courses of use to different non-departmental graduate degree programs.

#### Admission Requirements

Hold a baccalaureate degree with a major or minor in one of the natural sciences from an accredited college or university.

#### Degree Requirements

A total of 30 semester hours plus a thesis (6 hours), 33 semester hours plus a project (3 hours), or 36 semester hours with neither a thesis nor project.

By the end of the first year, the student should complete the Graduate English Competency Examination (GECE). Students should take the Graduate Area Comprehensive Examination in all core science courses.

#### Master of Science in Teaching

##### Core Courses

Course	Title	Semester Hours
EDFL 515	Methods of Educational Research	3
EDFL 514	Elementary Statistics	3
EDFL 568	Curriculum Methods	3
	<i>Hours</i>	9
Science Education Core Courses		
SCI 502	General Science for Teachers	3
SCI 507	Earth Science	3
SCI 513	Computer Applications in the Teaching of Science	3
SCI 522	Environmental Science	3
SCI 563	Problems and Issues in Science	3
SCI 581	Operation Physics I	3
SCI 599	Thesis, <i>or</i>	6
SCI 587	Independent Study	
	Science Elective, <i>or</i>	3
	Two Science Electives	6
	<b>Total Hours</b>	36

## DESCRIPTION OF COURSES

### Master-level Courses in Chemistry

**CHEM 511 Chemistry Seminar.** (1 Hour) Presentation and discussion of current chemical topics and research by students, faculty and visiting speakers. Prerequisite: Permission of instructor.

**CHEM 523 Advanced Analytical Chemistry.** (3 Hours) Prerequisites: Courses in Analytical Chemistry and Physical Chemistry. Principles and application of selected analytical methods including electrochemistry, spectroscopy and selected topics of unusual current interest.

**CHEM 526 Electro analytical Chemistry.** (3 Hours) Prerequisite: Advanced Analytical Chemistry. Discussion of potentiometric, conductometric, polarographic, amperometric, coulometric, controlled potential and stepping analysis and related techniques. Emphasis is also placed on theoretical considerations and applications to studies of chemical and charge transfer equilibria and kinetics.

**CHEM 531, 532 Biochemistry.** (3 Hours) Prerequisite: One year of Organic Chemistry. The chemical composition of living matter and the chemical mechanics of life processes.

**CHML 531, 532 Biochemistry Laboratory.** (1 Hour) Prerequisite: Chemistry 531 and 532. Basic purification and characterization techniques in Biochemistry.

**CHEM 536 Physical Organic Chemistry.** (3 Hours) Prerequisites: Physical Chemistry and Organic Chemistry. A study of organic molecular structure, Woodward Hoffmann Rules, substituents effects, intra- and intermolecular forces, kinetics and stereochemistry.

**CHEM 541 Advanced Inorganic Chemistry.** (3 Hours) Prerequisite: An undergraduate course in Physical Chemistry. A study of inorganic compounds with the application of Physical Chemistry principles to thermodynamic, kinetic and structural problems.

**CHEM 553 Thermodynamics.** (3 Hours) Prerequisite: Physical Chemistry. Principles of thermodynamics and their application to chemical and phase equilibria.

**CHEM 558 Quantum Chemistry.** (3 Hours) Prerequisite: Physical Chemistry. Principles and applications of quantum theory.

**CHEM 580 Thesis Research.** (Variable 1-6 Hours) Prerequisite: Permission of adviser. Selected topics arranged in consultation with the staff; includes literature, research, and laboratory investigation of a problem.

### Doctoral-level Courses in Chemistry

**CHEM 711 Seminar** (0.5 Hour) Presentations and discussions of current chemistry research topics given by invited speakers, department faculty members and students. Service learning to provide opportunities to students in scientific and social service activities.

**CHEM 721 Advanced Instrumental Analysis** (3 Hours). Prerequisite: Analytical Chemistry and Physical Chemistry (two semesters). Theoretical principles and laboratory techniques involved in characterization of chemical systems using

instrumental methods. This one semester course will present the following topics of interest: absorption and emission spectrometry, mass spectrometry, liquid and gas chromatography, and electrophoresis. A laboratory series on spectro-photometry, fluorometry, atomic absorption spectrometry, inductively coupled plasma atomic emission spectrometry, FT-IR, gas chromatography-mass spectroscopy, and high performance liquid chromatography are included in this course.

**CHEM 723 Advanced Analytical Chemistry** (3 Hours) Prerequisite: Analytical Chemistry and Physical Chemistry (two semesters). Quantitative chemical analysis, experimental error, statistics, atomic and molecular spectroscopy, electrochemical analysis and chemical separations. Theories, instrumentation, and applications of chemical analyses using electro analytical methods, absorption, emission, inductively coupled plasma (ICP) – mass spectrometry (MS), and chromatographic methods.

**CHEM 726 Electro analytical Chemistry** (4 Hours) Prerequisite: Advanced Analytical Chemistry. Principles and application of all modern electrochemical methods such as voltametrics, chrono-amperometry, spectroelectrochemistry, and thin layer electrochemistry etc. Electrode kinetics and mass transfer are discussed in detail.

**CHEM 729 Spectroscopic Methods** (3 Hours) Prerequisite: Analytical Chemistry (CHEM 320) and Organic Chemistry (CHEM 242). Using modern spectroscopic methods, mainly Nuclear Magnetic Resonance, Mass Spectrometry, X-Ray Crystallography, and Infrared Spectroscopy for elucidation of chemical compounds. Topics on new developments in modern NMR, X-Ray, MS and IR will be updated and included.

**CHEM 731 Advanced Biochemistry** (3 Hours) Prerequisite: Biochemistry 431. Protein, enzymology, bioenergetics, chemistry and intermediary metabolism of carbohydrates, chemistry and intermediary metabolism of carbohydrates, lipids, proteins and nucleic acids; Advanced topics on storage, transmission, and expression of genetic information, molecular immunology, membrane transport and hormone action.

**CHEM 732 Experimental Biochemistry** (3 Hours) Prerequisite: Biochemistry 431. Advanced techniques will be covered for the analysis of cellular function including cell culture and related microscopic techniques, cytotoxicity and cytostatic assays, characterization of kinase activity using immunostaining and electrophoretic methods. This course consists of one-hour lectures and three hours of laboratory work.

**CHEM 733 Advanced Molecular Biology** (3 Hours) Molecular mechanisms involved in replication, expression and regulation of prokaryotic genes. Topics include: DNA replication, repair, recombination, restriction-modification, recombinant DNA technology, plasmids and transposons, RNA transcription, processing and message splicing.

**CHEM 734 Physical Biochemistry** (3 Hours) Characterization of macromolecules, hydrodynamic methods, multiple equilibria, macromolecule-ligand interactions.

**CHEM 736 Physical Organic Chemistry** (3 Hours) Prerequisite: Organic Chemistry (two semesters). A study of organic molecular structure, reactive intermediates, molecular recognition, substituent effects, intra- and intermolecular forces, kinetics, catalysis, stereochemistry, and photochemistry.

**CHEM 738 Organic Synthesis** (3 Hours) Prerequisite: Organic Chemistry (two semesters). Formation of carbon-carbon and carbon-heteroatom bonds, functionalization and interconversion of functional groups, reactions of organic reagents, protective groups, total synthesis and asymmetric synthesis in organic synthesis.

**CHEM 741 Advanced Inorganic Chemistry** (3 Hours) Prerequisite: Inorganic Chemistry II (CHEM 340) or its equivalent. A study of symmetry and group theory, bonding and structures of inorganic compounds, coordination chemistry and acid-base chemistry.

**CHEM 742 Supramolecular Chemistry** (3 Hours) Supramolecular chemistry is the interdisciplinary area of science at the interface of chemistry and biology, which deals with noncovalent bonds between molecules (hosts and guests). Areas of study will include: noncovalent interactions, molecular recognition and its role in biological systems, artificial receptors, self-assembly, supramolecular structures and new materials.

**CHEM 743 Structural Inorganic Chemistry** (3 Hours) Concepts of the solid state as explored by crystallography, symmetry, polyhedra, and sphere packing, tetrahedral and octahedral structures of inorganic compounds.

**CHEM 744 Radiochemistry** (3 Hours) A study of natural radioactivity, nuclear systematics and reactions, radioactive decay processes, the transuranium elements, nuclear reactors and nuclear power energy, radiation detections/measurements, radiation biology/medicine and radiations safety security, etc.

**CHEM 745 Nuclear Waste Chemistry and Safety** (3 Hours) Prerequisites: CHEM 744 or consult the instructor. Chemistry of actinides, nuclear fuel cycle and radioactive wastes, advanced separation chemistry, and nuclear safety. It covers radioactive sources, decay, radiation shielding, separation chemistry, and emerging and innovative treatment techniques for fuel reprocessing and radioactive waste treatment. Handling and disposal of nuclear waste, and technical and regulatory aspects of waste management will be reviewed. It will also study nuclear security, medical treatment of radiological injuries, cleanup and decontamination after a radiological incident.

**CHEM 746 Radiation Detection and Measurement** (3 Hours) Prerequisite: CHEM 723. The course studies the principles of radiation detection, instrumentation systems and their applications. This course prepares students to seek job opportunities in nuclear energy, radiological sciences, nuclear medical science and

pharmacy, industrial safety and control systems and radiation protection.

**CHEM 747 Inorganic Reaction Mechanisms** (3 Hours) Prerequisite: Any 700 level course. The topics include mechanism of reactions of certain inorganic compounds, stereochemical changes in complexes, redox reactions, and homogeneous and heterogeneous catalysts.

**CHEM 748 Actinide Chemistry** (3 Hours) Prerequisite: CHEM 723 and Lab. The course studies the fundamental chemistry of actinide elements from Ac through Lr: the structures, physical and chemical properties. The course examines their chemistry (speciation/transport) in the environment, including geological, biological metrics as well as nuclear wastes. Topics also include separation chemistry and safe handling and storage.

**CHEM 749 Organometallic Chemistry** (3 Hours) Prerequisite: Physical Organic Chemistry (CHEM 736) or equivalent. A study of formation, stability, and reactivity of metal-carbon bond of main group and transition metal. It will cover the usage of organometallics in organic synthesis and catalysis.

**CHEM 750 Chemistry Teaching Practicum** (1 Hour) This course is designed to provide Graduate Teaching Assistants (TAs) with information which can be used to enhance and improve their teaching effectiveness and to learn about teaching approaches that are effective at the college level and to practice and discuss aspects of their teaching assignments.

**CHEM 752 Atomic and Molecular Spectroscopy** (3 Hours) Prerequisite: Physical Chemistry (two semesters). Concepts and methods of modern atomic and molecular spectroscopy. Subjects covered include electric phenomena, absorption and emission of radiation, atomic spectroscopy, rotational spectroscopy, vibrational spectroscopy, electronic spectroscopy, and magnetic resonance spectroscopy.

**CHEM 753 Thermodynamics** (3 Hours) Prerequisite: Physical Chemistry (two semesters). Laws of thermodynamics and their chemical applications. Introduction to chemical kinetics and statistical mechanics.

**CHEM 754 Kinetics** (3 Hours) Prerequisite: Physical Chemistry (two semesters). Mechanics of chemical reactions cross-sections, and rate constants. Elastic, inelastic, and rearrangement channels are discussed, using quantum and semi classical techniques.

**CHEM 755 Mechanisms of Organic Chemistry** (3 Hours) Prerequisite: Organic Chemistry (two semesters). A study of mechanistic aspects of organic reactions included the rate theory, and reaction mechanism, experimental methods and treatment of data.

**CHEM 758 Quantum Chemistry** (3 Hours) Prerequisite: Physical Chemistry (two semesters). (Computational Chemistry) Important concepts of quantum chemistry at the intermediate level, including angular momentum, perturbation theory, electronic structure of molecules, and radiation matter interaction. Applications may vary from year to year.

**CHEM 763 Statistical Mechanics** (3 Hours) Prerequisite: Physical Chemistry (two semesters) A study of statistical mechanical ensembles, partition functions and their relationship to thermodynamics, lattice statistics, molecular distribution and correlation functions, the theories of liquids and solutions, phase transitions, and cluster theory.

**CHEM 768 Molecular Quantum Mechanics** (3 Hours) Prerequisite: Quantum Chemistry (CHEM 758) or equivalent. Theoretical, algorithmic, and practical aspects of the methods of molecular quantum mechanics and their application to chemical systems. Topics covered include Hartree-Fock theory, perturbation theory, configuration interaction, coupled-cluster theory, and density-function theory.

**CHEM 780 Dissertation** - (1 - 9 Hours)

**CHEM 782 Special Topics in Analytical Chemistry**, (3 Hours) Selected topics not covered in regularly scheduled courses, and current research topics in analytical chemistry.

**CHEM 783 Special Topics in Biochemistry**. (3 Hours) Selected topics not covered in regularly scheduled courses, and current research topics in biochemistry.

**CHEM 784 Special Topics in Organic Chemistry**. (3 Hours) A course in a specific area of organic chemistry such as structure determination in organic chemistry, or current research subject not covered in regularly scheduled courses presented to fit the interests of advanced students.

**CHEM 785 Special Topics in Inorganic Chemistry**. (3 Hours) Topics include subjects of current research in inorganic chemistry, but not covered in regularly scheduled courses.

**CHEM 786 Special Topics in Physical Chemistry**. (3 Hours) Topics vary from year to year will include subjects such as photochemistry, solid state, surface chemistry, and radiation chemistry.

**CHEM 787 Nanoscience and Nanotechnology** (3 Hours) Prerequisites: Physical Chemistry (CHEM 342) and Organic Chemistry (CHEM 242). A comprehensive course provides an introduction to the rapidly developing field of Nanoscience and Nanotechnology with special emphasis on general and material chemistry, environmental science, biotechnology, and modeling. The topics include properties of individual nanoparticles, bulk nanostructures, carbon nanotubes, quantum wells, wires, and dots; the tools and methods for measuring these properties; methods for growing and synthesizing nanomaterials; applications in biological materials and the fabrication of nanomachines and devices.

**CHEM 788 Medicinal Chemistry** (3 Hours) Prerequisite: Organic Chemistry (CHEM 242) and Biochemistry II (CHEM 432). The course will cover an in-depth description of organic and biological compounds used as medicinal agents. Topics include the principles and practice of contemporary drug discovery and design; sources, chemical properties, structure-activity relationships, molecular modeling, structure-based drug design, drug-like properties,

compound library generation, optimization of high-throughput screening (HTS) hit using efficient synthetic reactions/transformations, metabolism, molecular target, modern chemical biology methods used to study drug actions, and specific mechanism of action studies.

#### **Master level Courses in General Science**

**SCI 502 General Science for Teachers.** (3 Hours) A study of topics in astronomy, chemistry, geology, meteorology and physics.

**SCI 507 Earth Science.** (3 Hours) An exploratory course dealing with basic concepts in geology, meteorology, and astronomy.

**SCIL 507 Earth Science for Teachers Lab.** (1 Hour) Laboratory experiments designed to expand subject matter taught in SCI 507.

**SCI 508 Cosmology for Non-Scientists.** (3 Hours) A study of the structure, makeup origin, and evolution of the universe and objects in it.

**SCI 509 Earth History** (3 Hours) The course studies history of the continents and oceans and the changes to the atmosphere through time.

**SCI 513 Computer Applications in the Teaching of Science.** (3 Hours) This course includes computer concepts; programming in the Basic language; building modules for computer assisted instruction and computer aided instruction; problem solving on a microcomputer system.

**SCI 515 Earth and Space Science** (3 Hours) This course is the study of Earth Science, Geology, and Meteorology.

**SCI 516 Physical Science I for Middle School Teachers** (3 Hours) This course is the study of properties and reactions of matter.

**SCI 517 Physical Science II for Middle School Teachers** (3 Hours) This course is the study of Physics, Astronomy and Technology that includes: (in Physics) measurement, force, motion, energy, simple and compound machines, electricity and magnetism, sound, light and heat; (in Astronomy) stars in the night sky, solar system, lunar phases, eclipses, earth seasons, galaxies and universe.

**SCI 518 Life Science for Teachers** (3 Hours) This course is the study of biochemistry, the cell, genetics, organ systems, natural selection, diversity, ecology and the property and reaction of matter.

**SCI 519 Environmental Science and Chemistry for Teachers.** (3 Hours)

**SCI 520 Methodology for Science Teaching** (3 Hours) This course includes exemplary teaching strategies and research-based methods, i.e. Inquiry-based learning, cooperative learning, and the use of technology.

**SCI 522 Environmental Science.** (3 Hours) A general study of environmental problems created by various kinds of pollution and the effects of man's bio-physical environment.

**SCI 523 Seminar in Science** (3 Hours) Provides the opportunity to discuss the most pertinent trends in science and to become familiar with current research.

**SCI 524 Elements of Astronomy** (3 Hours) Survey of solar and stellar systems, with emphasis on the historical and scientific development of astronomy.

**SCI 525 Hands-on Activity in Astronomy** (3 Hours) This course is support for instructional competency in astronomy in Mississippi.

**SCI 551 Hands-on Universe in Mississippi I.** (3 Hours) This course integrates mathematics, science and technology in the context of exciting astronomical explorations. This course addresses many of the goals set by the National Council of Teachers of Mathematics and the National Research Council for Math and Science Education.

**SCI 563 Problems and Issues in Science.** (3 Hours) Content in elementary science; aims and methods of instruction, new curricular developments.

**SCI 552 Hands-on Universe in Mississippi II.** (3 Hours) Prerequisite: SCI 551. This course integrates mathematics, science and technology in the context of exciting astronomical explorations. This course addresses many of the goals set by the National Council of Teachers of Mathematics and the National Research Council for Math and Science Education.

**SCI 580 Science Technology and Environment** (3 Hours) An overview of contemporary topics in science and technology. The scientific and technical materials will be covered in detail, then the social consequences of applying or misapplying that knowledge will be examined.

**SCI 581 Operation Physics I.** (3 Hours) This course is the study of mechanics that includes: measurement, force and motion, simple machines and forces, and fluids.

**SCI 582 Operation Physics II.** (3 Hours) This course is the study of sound and light that include: measurement, sound, behavior of light, color and vision.

**SCI 583 Operation Science for Teachers I.** (3 Hours) This course addresses the conceptual understanding and teaching of topics related to physics, space science and meteorology. The curriculum reflects the broader effort to be more inclusive of all the topics that teachers cover in the K12 area. Objectives for the course are correlated to the Mississippi Science Curriculum Structure.

**SCI 584 Operation Science for Teachers II.** (3 Hours) This course addresses the conceptual understanding and teaching of topics related to physics, space science and meteorology. The curriculum reflects the broader effort to be more inclusive of all the topics that teachers cover in the K12 area. Objectives for the course are correlated to the Mississippi Science Curriculum Structure

**SCI 587 Independent Study.** (1-3 Hours) For students who are actively working on special projects and consulting with their major professor.

**SCI 592-592W Seminar in Meteorology.** (3 Hours) Presentation and discussion of special topics and research in meteorology by staff members, students and guest lecturers.

**SCI 599 Thesis.** (6 Hours) A minimum of 40 hours of research for the thesis must be scheduled. The thesis

must show (a) mastery of the techniques of research, and (b) a very distinct contribution to the field under investigation and study.

**SCI 601W Seminar in Environmental Science.** (3 Hours) Advanced topics of special interest, current research, field trips, demonstrations and guest lecturers.

**SCI 602 Construction of Teaching Materials for Secondary Science Instruction.** (3 Hours) Special work in models, charts, graphs, photography, electrical apparatus, mechanical equipment, etc.

**SCI 603 Special Topics in Science.** (3 Hours) Topics of current interest, both theoretical and experimental.

**SCI 604 Advanced Methods—Secondary School Science.** (3 Hours) Experience with science teaching. Major trends in the new science courses and methodology programs.

**SCI 605 Analysis of Science Curriculum.** (3 Hours) A critical examination of contemporary and potential science curricular projects.

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**DEPARTMENT OF CIVIL AND ENVIRONMENTAL ENGINEERING AND INDUSTRIAL SYSTEMS AND TECHNOLOGY**

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Dr. M. S. Khan, Assistant Professor  
Dr. D. Leszczynska, Professor  
Dr. Y. Li, Professor  
Dr. J. L. Murphy, Professor  
Dr. H. Shih, Professor  
Dr. K. Wen, Assistant Professor  
Dr. R. H. Whalin, Professor  
Dr. W. Zheng, Professor

The Department of Civil and Environmental Engineering and Industrial Systems and Technology offers the Master of Science in Education with Technology Education concentration and the Master of Science in Hazardous Materials Management. The Master of Science in Education degree with a concentration in Technology Education is designed to improve the competencies of technology educators, administrators, and other professionals in secondary and post-secondary schools and contemporary technology based workforces. The Master of Hazardous Materials Management is designed to prepare individuals for safety or environmental management manager positions in the safe handling, transporting and managing of hazardous materials and toxic chemicals.

**Admission Requirements**

Admission to the graduate degree program in Hazardous Materials Management and Technology Education is governed by the regulations of the Graduate School.

**Admission Requirements**

Admission to the graduate degree program in Hazardous Materials Management and Technology Education is governed by the regulations of the Graduate School.

**Hazardous Materials Management**

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**Degree Requirements**

The degree options are 30 semester hours plus a thesis; 33 semester hours plus a project; or 36 semester hours of course credit.

**Hazardous Materials Management Concentration**

Course	Title	Semester Hours
ITHM 520	Introduction of Hazardous Materials Management	3
ITHM 523	Statistics/Data Analysis	3

ITHM 524	Public Issues in Hazardous Materials	3
ITHM525/ BIO 506	Natural Resources and Conservation	3
ITHM 529	Env Toxicology and Risk Assessment	3
<b>Total Hours</b>		<b>15</b>

TE 504	Laboratory Planning and Management	3
TE 505	History and Philosophy of Technology Educ.	3
TE 512	Administration and Funding	3
TE 513	Instructional Aids	3
<b>Hours</b>		<b>15</b>

#### Emergency Management Concentration

Course	Title	Semester Hours
ITHM 523	Statistics/Data Analysis	3
ITHM 533	Application of GIS in Hazardous Materials Management	3
ITHM 536	Hazards Risk Management	3
ITHM 537	Social and Economic Impacts of Disaster	3
ITHM 538	Nature Hazards and Terrorism	3
ITHM 539	Radiation Safety and Preparedness	3
<b>Total Hours</b>		<b>18</b>

#### Elective Courses

ITHM 521	System Modeling	3
ITHM 522	Chemistry of Hazardous Materials	3
ITHM 526	Environmental Regulations	3
ITHM 527	Water and Wastewater Treatment	3
ITHM 528	Waste Minimization	3
ITHM 530	Industrial Waste Treatment and Tech.	3
ITHM 532	Emergency Management for Hazardous Materials Management	3
ITHM 534	Independent Study	3
ITHM 535	Occupational Safety and Industrial Hygiene	3
<b>Total Hours 30, 33, or 36</b>		

\*Additional Elective Courses Available

#### Technology Education

##### Degree Requirements

The degree options are 30 semester hours plus a thesis; 33 semester hours plus a project; or 36 semester hours of course credit.

Course	Title	Semester Hours
TE 501	Current Literature, Issues and Research	3

#### Courses in Education

EDFL 514	Elementary Statistics	3
EDFL 515	Methods of Educational Research	3
EDFL 568	Curriculum Methods	3
<b>Hours</b>		<b>9</b>

#### Elective Courses

TE 500	Seminar/Workshop	3
TE 511	Technical Education	3
TE 515	Career Education	3
TE 516	Curriculum Development	3
TE 521	Problems in Electronics	3
TE 522	Problems in Drafting/Design	3
TE 523	Problems in Metals	3
TE 524	Problems in Woods	3
<b>Total Hours</b>		<b>30, 33 or 36</b>

\*Additional Elective courses Available

## DESCRIPTION OF COURSES

### Hazardous Materials Management

**ITHM 500 Graduate Research/Thesis.** (1-4 hours) The student is required to select an appropriate topic with approval from advisor and do a presentation.

**ITHM 520 Introduction of Hazardous Materials Management.** (3 Hours) (For Non-hazardous Materials Management Majors). An introduction to contemporary national problems of air and water pollution, environmental monitoring, toxicology, hazardous waste; general problems of environmental contamination; legal and political aspects of current regulations; general scientific principles applied to the evaluation and control of specific problems.

**ITHM 521 System Modeling.** (3 Hours) Practical application of simulation to diverse environmental systems including air, land, surface, sub-surface, water systems and also, the hazardous materials management models.

**ITHM 522 Chemistry of Hazardous Materials.** (3 Hours) This course shows how chemistry can be applied to hazardous materials. The course is designed to introduce and train students' awareness of the unique requirements involved in handling hazardous materials when they are encountered in different situations, thus reducing the loss of lives and property. Prerequisite: Chemistry 135 & 235.

**ITHM 523 Statistics/Data Analysis.** (3 Hours) This course is designed for the development and

maintenance of proficiency in statistical interface. It contains a comprehensive overview of how statistics work in actual cases and how it can be applied in hazardous materials management. Prerequisite: Math 111, CSC 115, & 203.

**ITHM 524 Public Issues In Hazardous Materials/Waste.** (3 Hours) This course is an overview of the strategies, tactics and techniques regarding environmental affairs, both public and private.

**ITHM 525/BIO506 Natural Resources and Conservation.** (3 Hours) This course is designed to give students pertinent information of our natural resources with emphasis on their origin, properties, use, misuse, and conservation practices.

**ITHM 526 Environmental Regulations.** (3 Hours) A study of Federal Laws and Regulations concerning hazardous materials and wastes. This course will introduce students to laws and regulations in Mississippi and the nation. The course emphasizes how to implement and comply with laws.

**ITHM 527 Water and Wastewater Treatment.** (3 Hours) Students will be given an overview on waste/wastewater treatment through discussions of various selected topics. The primary focus of these topics will be to introduce students to treatment methods. Prerequisite: BIO 115 and CHEM 142.

**ITHM 527 Water and Wastewater Laboratory.** (1 hour) This course is the supplementary course of ITHM 527; laboratory activities which develop techniques for testing water and wastewater. This will involve tests for COD, BOD, Alkalinity, Nitrogen, Colonial Count, TCLP and several other tests. Prerequisite: Bio 101, CHEM 135 & 235, and ITHM 401.

**ITHM 528 Waste Minimization.** (3 Hours) This course is designed to make students aware of the vast number of problems encountered as a result of disposing waste. Also, students will be given lectures on methods of recycling, reuse and reducing our waste.

**ITHM 529 Environmental Toxicology and Risk Assessment.** (3 Hours) This course will involve studying chemicals and harmful actions of chemicals on biological issues. This will include understanding chemical reactions and interactions of biological organisms. Students will also be introduced to scientific data and methods currently used to assess human risk to environmental chemicals.

**ITHM 530 Industrial Waste Treatment and Technology.** (3 Hours) This course is an advanced course for hazardous waste treatment technology. It includes training in pretreatment of hazardous materials, chemical/physical process, stabilization, recovery processes, final disposal of, and secured landfill stabilization. EPA requirements for each process will be addressed in this class. Prerequisite: ITHM 302.

**ITHM 532 Emergency Management for Hazardous Materials.** (3 Hours) This is an overview of emergency management concepts for commercial wastes and hazardous materials. It will also discuss emergency management concepts of the four phases of Emergency Management.

**ITHM 533 Application of GIS in Hazardous Materials Management.** (3 Hours) This course provides a survey of the fundamentals of Geographic Information Systems. The course will provide hands on experience with hardware and software using ArcInfo developed by Environmental System Research Institute.

**ITHM 534 Independent Study.** (1-3 Hours) This course will provide the student the opportunity to work on special topics of interest with private companies, state and federal agencies related to the hazardous materials management field as approved by the advisor from the department.

**\*ITHM 535 Occupational Safety & Industrial Hygiene.** (3 Hours) This course provides an introduction to industrial hygiene and to occupational safety and health. It is designed to provide students with basic skills and knowledge on the science and art of identifying, evaluating and controlling workplace hazards.

**ITHM 536 (3) Hazards Risk Management.** This course will introduce students to the basics models, theories, and concepts that underlie modern emergency management's understanding of hazards and disasters. Students will examine the hazard-scape, using various hazard models, with a focus on hazard mitigation and emergency management issues. The interdependence of physical, social and economic characteristics in determining vulnerability will be considered in past disasters and for future planning. The importance of hazard and risk management in a comprehensive emergency management program will also be presented.

**ITHM 537 Introduction to Social and Economic Impact of Disasters (3)** this course is to introduce key terms associated with sustainable disaster recovery, describe the individual, social economic and environmental impacts of disasters, and begin to describe the complexities of recovery utilizing case studies

**ITHM 538 Nature Hazards and Terrorism (3)** this course introduces the students to the various disasters caused by nature, man-made and forms of terrorism. It evaluates how the different levels of governments manage and respond to disasters, governments' policy and continuity plans. There will be a study of different nature and terrorism cases that happened in past years, and discussion and demonstration of "lessons learned and best practices.

**ITHM 539 Radiation, Preparedness and Exercises (3)** this class introduces the students to the radiation safety, preparedness and emergency response, principles of probabilistic risk assessment. The exercises include case studies, survey, detection and population monitoring.

#### **Technology Education**

**TE 500 Seminar/Workshop.** (3 Hours) Cover factors involved in evaluating the current trends, management, leadership and training for technology based industry, education and other contemporary workforces. Also designed to identify areas where practical training is

needed, the specific timeframes of those trainings and proper technology implementation for workforce trainings.

**TE 501 Current Literature, Issues and Research.** (3 Hours) Exams the current issues that impact industrial and technology education. Focuses on the identification, analysis, and discussion of scholarly research in the fields of technology and education, and how various technologies are utilized in academia and the workforce for proficiency and enhancement.

**TE 504 Laboratory Planning and Management.** (3 Hours) Designing various industrial education laboratories and facilities. Includes attention to purpose, recommended sizes and other specifications.

**TE 505 History and Philosophy of Technology Education.** (3 Hours) Provides a comprehensive compilation of technology's philosophy. Also offers an analysis of political, social, cultural, and engineering context affecting the nature of technology along with the influence on technology of historical, metaphysical, and epistemological concerns as it relates to factors involved in developing the trends and leaders in industrial, technology, and career and technical education.

**TE 511 Technical Education.** (3 Hours) Provides a historical overview of career and technical education, and places emphasis on trends, community surveys, curricula, definitions, and needs of post-secondary career and technical education and technology education programs.

**TE 512 Administration and Funding.** (3 Hours) Identifying current legislation and funding practices concerning industrial education. Function and relationship of directors, supervisors and instructors in all fields of industrial education.

**TE 513 Instructional Aids.** (3 Hours) Covers the study of instructional aids and training media to properly implement technology means in education. This course focuses on use of multi-media, technology devices, and other technology tools to promote industrial and technology proficiency and innovation.

**TE 515 Career Education.** (3 Hours) Covers aspects and concepts of education focusing on technology and the leadership of career and technical organizations (i.e. career discovery, career counseling, career assessment, etc.). Also identifies current goals and objectives in industrial and career education, and focuses on effective tools that will enhance educational processes and workforce development.

**TE 516 Curriculum Development.** (3 Hours) Principles and techniques of designing and writing industrial education curricula. Attention will be given to goals, behavioral objectives, designing programs to meet objectives and evaluating results.

**TE 521 Problems in Electricity/Electronics** (3 Hours) Opportunity to study problems related to the area of electricity/electronics. Problems based on needs of students with approval of the advisor and the Dean of the School.

**TE 522 Problems in Drafting.** (3 Hours) Opportunity to study problems related to the area of drafting.

Problems based on needs of students with approval of the Dean of the School and his advisor.

**TE 523 Problems in Metals.** (3 Hours) Opportunity to study problems related to the area of metals. Problems based on needs of students with approval of the Dean of the School and his advisor.

**TE 524 Problems in Woodworking.** (3 Hours) Opportunity to study problems related to the area of woodworking. Problems based on needs of students with approval of the Dean of the School and his advisor.

**TE 581W Residential Plumbing.** (3 Hours) Residential Plumbing is designed to acquaint the student with the fundamentals of basic residential and commercial plumbing. Much of the class time will be given to hands-on activities. Graduate students in residual plumbing are required to do a research project in air-conditioning and refrigeration.

**TE 590 Thesis.** (3 Hours) The candidate selects an appropriate topic with approval of adviser and his committee.

**TE 599 Independent Research.** (1-3 Hours) Opportunities for studying special problems and doing research in the major area. Developed and defined in consultation with the professor.

**TE 600 Seminar in Industrial Education.** (3 Hours) Seminar in the various fields of industrial and technical education.

**TE 601 Selection and Organization of Subject Matter.** (3 Hours) Analysis and selection of materials for junior and senior high school, and also, adult industrial technical education.

**TE 602 Evaluation of Programs of Industrial and Technical Education.** (3 Hours) Evaluation principles and practices in the specialized areas of industrial arts, technical and industrial education.

**TE 603 Research in Industrial Education.** (3 Hours) Rationale for and methods of research in education. Emphasis is given to the identification of researchable problems and interpretation of research studies in industrial education.

**TE 621 Coordination in Occupational Training and Placement Program.** (3 Hours) Analysis of objectives and scope of trade and industrial cooperative education program, apprenticeship, and general education work experiences.

**TE 622 Developing Occupational Curricula in Two-Year Colleges.** (3 Hours) Approaches to occupational curriculum development and course construction in junior colleges. For prospective teachers and administrative personnel.

**TE 688 Internship.** (variable credit) Supervised graduate internship and externship in various areas of industrial education.

**TE 699 Reading and Independent Study.** (variable credit) Study on an individual or group basis in industrial education.



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**DEPARTMENT OF ELECTRICAL &  
COMPUTER ENGINEERING AND  
COMPUTER SCIENCE**

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Dr. S. Hong, Associate Professor  
Dr. J. Jackson, Associate Professor  
Dr. M. Manzoul, Professor  
Dr. N. Meghanathan, Professor  
Dr. K. Melpu, Assistant Professor  
Dr. T. Pei, Professor  
Dr. A. Tanner, Associate Professor

The Department of Electrical and Computer Engineering and Computer Science offers the Master of Science in Computer Science. The curriculum is geared to 1) provide training for those preparing to enter fields where a substantial working knowledge of computing is required, 2) provide additional training to people already working in the field, and/or 3) prepare students for study at the doctoral level.

**Program Objectives**

1. To afford students the opportunity for in-depth study of Computer Science concepts and theories.
2. To keep abreast of, and expose students to, state-of-the-art, as well as state-of-the-practice, computer applications and technologies.
3. To engage faculty and students in meaningful computer science research, and computer science applications research and development.
4. To promote professional development and growth of students and faculty.

**Admission Requirements**

In addition to satisfying the university requirements to enter the graduate school, students must meet other specific requirements in order to be formally admitted to the Department of Electrical and Computer Engineering and Computer Science program. Ideally, students will have a B.S. in Computer Science, or a related field, and at least the equivalent of the following courses:

CSC 118	Programming Fundamentals
CSCL 118	Programming Fundamentals Lab
CSC 119	Object-Oriented Programming
CSCL 119	Object-Oriented Programming Lab

CSC 216	Computer Architecture and Organization
CSC 216L	Computer Architecture and Organization Lab
CSC 225	Discrete Structures
CSC 228	Data Structures and Algorithms
CSC 228L	Data Structures and Algorithms Lab
CSC 325	Operating Systems
EN 212	Digital Logic
ENL 212	Digital Logic Laboratory
BIO 111	General Biology
CHEM 141	General Chemistry
MATH 231	Calculus I
MATH 232	Calculus II
MATH 355	Probability and Statistics
PHY 211	General Physics I
PHY 212	General Physics II

Students who do not have the required background may be admitted as conditional students. These students must take specified courses to make up deficiencies and no credit toward the degree is awarded for courses prescribed to satisfy entrance requirements.

**Degree Requirements**

The Department offers courses on a semester basis. Thirty-six credit hours are required for a master's degree. All students are required to pass the departmental Graduate Area Comprehensive Examination. Upon successful completion of 18 hours of courses, completion of the Graduate English Proficiency Exam, completion of the core courses, and maintaining a 3.0 GPA, students will be eligible to take the Graduate Area Comprehensive Exam. Students will be tested on content covered in each of the core courses. Students can choose one of the three-degree options: *Thesis*, *Project* or *Course-only* option.

**Areas of Emphasis**

Networks & Communications	Software Engineering
Computer Architecture	Information Systems
Algorithm Design & Analysis	Artificial Intelligence
Parallel/Distributed Computing	Informatics
Modeling and Simulation	Data Science
Computability & Complexity	Cyber Security

**Course Requirements for the Degree Options**

All the three-degree options require 36 credits, out of which 12 credits of core courses and 9 credits of major courses are required. The option specific requirements are:

*Thesis*: Electives (6 credits) and CSC 599 (6 credits)  
*Project*: Electives (9 credits) and CSC 595 (3 credits)  
*Course-only*: Electives (15 credits)

Core Course	Title	Semester Hours
CSC 511	Object-Oriented Programming	3
CSC 515	Data Structures and Algorithm Analysis	3
CSC 518	Operating Systems	3
<b>Total Hours</b>		12

### Major Courses

*Students must choose three major courses*

*for a total of 9 hours*

CSC 519	Principles of Programming Languages	3
CSC 520	Database Management Systems	3
CSC 524	Comp. Com. Networks and Distributed Processing	3
CSC 525	Wireless Ad hoc Networks	3
CSC 526	Automata Theory	3
CSC 527	Real-time Systems	3
CSC 529	Compiler Construction	3
CSC 530	Theory of Computation	3
CSC 531	Computer Simulation Methods and Models	3
CSC 537	Cloud Computing	3
CSC 541	Cryptography and Network Security	3
CSC 545	Artificial Intelligence	3
CSC 549	Applied Combinatorics and Graph Theory	3
CSC 551	Parallel and Distributed Computing	3
CSC 555	Information Storage and Retrieval	3
CSC 560	Software Engineering	3

### ELECTIVES

The elective courses that can be included in the student's degree plan must be approved by the student's Major Advisor and the Department Chair. The elective courses need to be of CSC course prefix and have to be at the 5xx and/or 6xx-levels.

### TOTAL REQUIRED FOR DEGREE:

(Thesis, Project or Course-only options) **36**

### DESCRIPTION OF COURSES

**CSC 505 Computer Mathematics.** (3 Hours) Elements of set theory, functions and relations nondecimal numbers, data representation, Boolean algebra. Review of elementary differential and integral calculus with applications to the problems in computer science.

**CSC 508 Legal and Economic Issues in Computing.** (3 Hours) A presentation of the interactions between users of computers and the law and a consideration of the economic impacts of computers. Includes discussion of computer crime, privacy, electronic fund transfer, and automation.

**CSC 509 Computers and Society.** (3 Hours) History of computing and technology; place of computers in modern society; the computer and individual; survey of computer applications, legal issues; computers in decision making processes; the computer scientist as a professional; futurist's view of computing; public perception of computers and computer scientists.

**CSC 511 Object-Oriented Programming.** (3 Hours) Discussion of object-oriented languages. Object-Oriented techniques using the C++ language, classes, objects, constructors, destructors, friend functions, operator overloading, inheritance, multiple inheritance, and polymorphism. Reusability is emphasized.

**CSC 512 Computer Architecture.** (3 Hours) An advanced introduction to computer design and architecture. Topics include instruction set architecture, RISC computers, control unit design, pipelining, vector processing, memory system architecture, and classification of computers.

**CSC 514 Statistical Methods for Research Workers.** (3 Hours) Estimation and tests of hypotheses; regression and correlation; analysis of variance; non-parametric statistics; chi-square. SAS programming for data analysis.

**CSC 515 Data Structures and Algorithm Analysis.** (3 Hours) Mathematical foundations for complexity theory, asymptotic notation, recurrence relations. Strategies for development of algorithms like divide and conquer, greedy, dynamic programming, backtracking. Exposure to some typical and important algorithms in computer science. Introduction to the theory of NP-completeness.

**CSC 518 Operating Systems.** (3 Hours) Emphasizes the concepts of process communication and synchronization, protection, performance measurement, and evaluation. Problems associated with mutual exclusion and synchronization, concurrent processes, information, process, device, and memory management are examined. Implementation of I/O and interrupt structure is also considered.

**CSC 519 Principles of Programming Languages.** (3 Hours) Important programming language concepts including, representation of data and sequence control, data abstraction and encapsulation; procedural and non-procedural paradigms: functional, logic, and object-oriented languages; distributed and parallel programming issues.

**CSC 520 Database Management Systems.** (3 Hours) Introduction to data base concepts including data independence; relations; logical and physical organizations; schema and subschema. Hierarchical, network, and relational models with description of logical and physical data structure representation of the database system. Normalization: first, second, and third normal forms of data relations. Relational algebra and

relational calculus; data structures for establishing relations; query functions.

**CSC 521 Linear Algebra and Finite Mathematics.** (3 Hours) Matrices and determinants; ranks of matrix; inverse of matrix; solving systems of linear equations; bases of a vector space; probability; permutations and combinations; Gaussian vector space; probability; elimination, Gauss-Seidel iteration.

**CSC 523 Probability and Statistical Inference.** (3 Hours) Elements of probability; combinatorial methods; discrete and continuous distributions; cumulative distribution functions; moment generating functions; distribution associated with normal distributions derived distributions.

**CSC 524 Computer Networks and Distributed Processing.** (3 Hours) Topologies, media selection, medium access control for local area networks (LANs) including high speed and bridged LANs; circuit switched, ISDN wide area networks (WANs) internetworking issues and standards, 150/051, TCP/IP protocols.

**CSC 525 Wireless Ad hoc Networks.** (3 Hours) This is a course on the fundamentals, design, architecture, protocols and applications of wireless ad hoc networks. The course will focus on the issues associated with the topology control, MAC layer, network layer, transport layer, security aspects, mobility models and energy consumption models of wireless ad hoc networks. The course will also look at the use of graph theory algorithms for simulating communication protocols in mobile ad hoc networks as well as data gathering protocols in wireless sensor networks.

**CSC 526 Automata Theory.** (3 Hours) Definition and representation of finite state automata and sequential machines. Equivalence of states and machines, congruence, reduced machines, and analysis and synthesis of machines. Decision problems of finite automata, partitions with the substitution property, generalized and complete machines, probabilistic automata, and other topics.

**CSC 527 Real-Time Systems.** (3 Hours) An introduction to the problems, concepts, and techniques involved in computer systems, which must interface with external devices. These include process control systems, computer systems embedded within aircraft or automobiles, and graphics systems. The course concentrates on operating system software for these systems.

**CSC 529 Compiler Construction.** (3 Hours) An introduction to the major methods used in compiler implementation. The parsing methods of LL (k) and LR (k) are covered as well as finite state methods for lexical analysis, symbol table construction, internal forms for a program, run time storage management for block structured languages, and an introduction to code optimization.

**CSC 530 Theory of Computation.** (3 Hours) A survey of formal models for computation. Includes Turing Machines, partial recursive functions, recursive and recursively enumerable sets, abstract complexity theory, program schemes, and concrete complexity.

**CSC 531 Computer Simulation Methods and Models.** (3 Hours) A study and construction of discrete-system simulation models. Use of discrete-system simulation language (GPSS/H), advance programming techniques, random number generation, generation of various random variate, and statistical validation procedure.

**CSC 532 Numerical Methods.** (3 Hours) Applying principles and techniques for computing methods. Solution of linear and nonlinear equations. Matrix methods for systems of equations. Polynomial approximation. Numerical integration. Solution of ordinary differential equations using various methods.

**CSC 533 Distributed Database System.** (3 Hours) Prerequisites: CSC 520, 524. A consideration of the problems and opportunities inherent in distributed database on a networked computer system. Includes file allocation; directory systems; deadlock detection and prevention; synchronization; query optimization; and fault tolerance.

**CSC 535 Information System Analysis and Design.** (3 Hours) Prerequisite: 519. A practical guide to information systems programming and design. Theories relating to module design, coupling, and module strength are discussed. Techniques for reducing a system's complexity are emphasized. The topics are oriented toward the experienced programmer or systems analyst.

**CSC 537 Cloud Computing.** (3 Hours) The course will present the state of the art in cloud computing technologies and applications as well as providing hands-on project opportunities and experiment with different technologies. Topics will include: telecommunications needs; architectural models for cloud computing; cloud computing platforms and services; security, privacy, and trust management; resource allocation and quality of service; cloud economics and business models; pricing and risk management; interoperability and internetworking; legal issues; and novel applications.

**CSC 539 Special Topics in Computer Science.** (Variable 1-9 Hours) Prerequisite: Consent of instructor. Topics and problems of information systems that are of practical importance and current interest. New developments in system concepts, techniques, and equipment.

**CSC 540 Microcomputer Local Area Networks.** (3 Hours) Prerequisites: 518. This course describes various criteria for selecting and implementing local area networks (LANs) consisting of microcomputers.

**CSC 541 Cryptography and Network Security.** (3 Hours) This course will focus on graduate-level topics in cryptography and network security, including: Symmetric Key and Public Key encryption algorithms, Digital Signatures, Certificates, Cryptanalysis, Key management and distribution, Classical network attacks and their solutions, User authentication protocols, Transport-level security, Wireless network security, E-mail security, Web security, IP security, Distributed system security, Firewalls and Intrusion detection systems.

**CSC 545 Artificial Intelligence.** (3 Hours) Efficient and intelligent search techniques. Knowledge representation e.g., logic, and semantic nets. Reasoning techniques including reasoning under uncertainty, e.g., fuzzy reasoning. Exposure to different artificial intelligence systems like planning and learning (including neural networks).

**CSC 549 Applied Combinatorics and Graph Theory.** (3 Hours) A study of combinatorial and graphical techniques for complexity analysis including generating functions, recurrence relations, Polya's theory of counting, planar directed graphs, and NP-complete problems. Applications of the techniques to the analysis of algorithms in graph theory, sorting, and searching.

**CSC 551 Parallel and Distributed Computing.** (3 Hours) Prerequisite: CSC 512 Computer Architecture or approval of Department. The course introduces the concepts and design of parallel and distributed computing systems. Topics covered include: Data versus control parallelism (SIMD/Vector, Pipelines, MIMD, Multi-core, GPU); Shared versus distributed memory (SMP and NUMA), Message passing Interface (MPI) and Topologies; Parallel and distributed algorithms: Paradigms, Models and Complexity, Scheduling, Synchronization, Deadlock detection, Fault tolerance and Load balancing.

**CSC 552 Applied Programming.** (3 Hours) Prerequisite: Department and advisor approval. This course focuses on the fundamentals of computing and is geared toward non-CS majors going into computational sciences. The course will cover key concepts of data structures, data manipulation, algorithms and efficiency, and how they apply to the various application domains specific to computational fields. The course will also provide an introduction to Python for computational sciences. Topics include: an introduction to computational complexity, data structures (arrays, lists, stacks, queues, trees, and graphs), elementary algorithms and their complexity.

**CSC 555 Information Storage and Retrieval.** (3 Hours) Advanced data structures, databases, and processing systems for access and maintenance. For explicitly structured data, interactions among these structures, access patterns and design of processing/access systems. Data administration, processing system life cycle, system security.

**CSC 560 Software Engineering.** (3 Hours) Formal approach to techniques and software design and development. Software cycle encompassed from initial ideas through code design and implementation with emphasis on object-oriented design techniques will be included. Software testing and maintenance will be discussed.

**CSC 571 Programming for Big Data.** (3 Hours) The course will expose students to three programming paradigms for big data analytics to cover the three Vs: Velocity, Volume, and Variety. The course will focus on design and development of programs based on the: (1) Supervised and unsupervised machine learning algorithms to perform predictive analytics of Big Data and implement them using a high-level interpreted

language such as Octave; (2) Map-reduce parallel programming paradigm for selected data-intensive computational problems; (3) Functional programming paradigm using languages such as OCaml to analyze big data in a recursive fashion. In addition, the course will enable students to be able to configure a distributed file system based on the Hadoop architecture for reliable shared storage and develop programs that interface with it, as well as manage large datasets using SQL-like access to unstructured data (Hive) and NoSQL storage solutions (HBase).

**CSC 573 Modeling and Simulation of Complex Systems.** (3 Hours) The course focuses on the application of modeling and simulation principles to large-scale non-linear complex systems with interconnected parts (like a biological cell, economy or an ecological system). Topics covered include: non-linear differential equations, networks, stochastic models, cellular automata, agent-based modeling and swarm-like systems.

**CSC 582 Social Network Analysis.** (3 Hours) This course will cover the structure and analysis of large social networks on models and algorithms that abstract their properties. Topics covered include: Nodes, edges, and network measures, structure, and visualization and tools, the tie strength of networks, trust in social media, analyzing and classifying user roles, attributes and behavior, link prediction and entity resolution, epidemic models, location-based social media analysis, social sharing and filtering, aggregation and data mining, and network strategies for the individual and for the government.

**CSC 595 Information Systems Development Project.** (Variable 1-6 Hours) Prerequisites: Pass comprehensive examination and consent of advisor. Provide the student with the experience in analyzing, designing, implementing, and evaluating information systems. Students are assigned one or more system development projects. The project involves part or all of the system development cycle.

**CSC 599 Thesis Research.** (Variable 1-6 Hours) Prerequisites: Pass comprehensive examination and consent of advisor. An independent study course for the preparation of a Master's thesis.

**CSC 601 Computing Algorithms.** (3 Hours) Prerequisite: CSC 515 Data Structures and Algorithm Analysis or CSC 323 Algorithm Design and Analysis or department approval. The course focuses on algorithms of different design strategies, and the mathematical concepts used in describing the complexity of an algorithm. Topics covered include: Asymptotic notations; Time complexity analysis of iterative and recursive algorithms; design strategies like Brute force, Divide and Conquer, Transform and Conquer, Greedy and Dynamic programming; Space-time tradeoffs in algorithms and NP-completeness - Heuristics and Approximation algorithms. The course will also cover graph theory algorithms and string matching algorithms with respect to the application of the above design strategies for specific problems.

**CSC 620 Database Management Systems.** (3 Hours) This course is designed for non-computer science

majors entering the Ph.D. in Computational and Data Enabled Sciences and Engineering. It introduces students to the concepts and theories of database systems, necessary in the CDS&E fields. Topics include: information models and systems; the database environment; data modeling; conceptual modeling using the entity-relationship approach and mapping to relational tables; the relational model including the relational data structure, integrity rules, relational algebra and relational calculus; normalization; data definition and data manipulation in SQL; conceptual, logical, and physical database design; security; transaction management; query processing; and advanced topics in database systems, and how this applies to computational and data enabled sciences and engineering.

**CSC 621 Machine Learning.** (3 Hours) Pre-requisite: CSC 601 Computing Algorithms or CSC 515 Data Structures and Algorithm Analysis or CSC 323 Algorithm Design and Analysis. This course will enable students to understand the underlying algorithms used in various learning systems. Topics covered include: Inductive classification, Decision-tree learning, Ensembles, Experimental evaluation, Computational learning theory, Rule learning, Neural network learning, Support vector machines, Bayesian learning, Instance-based learning and Text categorization.

**CSC 630 Computability and Complexity.** (3 Hours) This course will cover advanced topics in computability and complexity theory. Computability topics covered include: Church-Turing Thesis, Decidability, Reducibility, Recursion Theorem and Decidability of logical theories. Complexity topics covered include: Time Complexity (P, NP, NP-Completeness), Space Complexity (Savitch's theorem, PSPACE, NL-Completeness), Intractability, Probabilistic algorithms and Alternation.

**CSC 634 Big Data Mining.** (3 Hours) Pre-requisite: CSC 621 Machine Learning or department approval. This course will focus on data mining of very large amounts of data that is so large enough not to fit in main memory, characteristic of data retrieved from the web. Topics to be covered include: Distributed file systems and Map Reduce, Similarity search techniques, Real-time data-stream processing algorithms, Technology of search engines (PageRank, Link-spam detection, hubs-and-authorities approach) and Frequent-item set mining. The course will also expose students to algorithms for clustering very large, high-dimensional datasets.

**CSC 635 Big Data for Cyber Security.** (3 Hours) Pre-requisite: CSC 621 Machine Learning or department approval. This course will focus on data-driven approaches to detect threats and attacks that originate from diverse channels at a rapid rate, necessitating the need for scalable distributed monitoring and cross-relation with a substantial amount of contextual information. The course will cover various anomaly-based Big Data analytics solutions for Cyber Security.

**CSC 641 Network Science.** (3 Hours) Pre-requisite: CSC 601 Computing Algorithms or CSC 515 Data

Structures and Algorithm Analysis or CSC 323 Algorithm Design and Analysis. Topics covered include the measurement and structure of networks, methods for analyzing network data, including methods developed in physics, statistics, and sociology, graph theory, computer algorithms, mathematical models of networks, including random graph models and generative models, and theories of dynamical processes taking place on networks.

**CSC 651 Foundations of Programming and Computation Systems.** (3 Hours) This course will focus on graduate-level central concepts in modern programming languages, impact on software development, language design trade-offs, and implementation considerations. Functional, imperative, and object-oriented paradigms. Formal semantic methods and program analysis. Modern type systems, higher order functions and closures, exceptions and continuations. Modularity, object-oriented languages, and concurrency. Runtime support for language features, interoperability, and security issues. Prerequisite: experience in any object-oriented language.

**CSC 653 Large Scale Computing.** (3 Hours) Prerequisite: CSC 551 Parallel and Distributed Computing. The course will focus on large-scale modeling techniques, algorithms and computational techniques for Big Data computing. Large-scale modeling techniques covered will include linear models, graphical models, matrix and tensor factorizations, clustering, and latent factor models. Algorithmic topics include sketching, fast n-body problems, random projections and hashing, large-scale online learning, and parallel learning. The computational techniques covered in this course will provide a basic foundation in large-scale programming, ranging from the basic "parfor" to parallel abstractions, such as MapReduce (Hadoop) and GraphLab.

**CSC 661 Software Engineering for Computational Applications.** (3 Hours) This course focuses on computational software engineering for engineering and scientific applications. Topics include Characteristics of computational software, Development and maintenance activities, Requirement engineering for computational software, Problem analysis and solution design tools, Component reuse, Software reliability, and Computational software validation and verification.

**CSC 663 High Performance Scientific Computing.** (3 Hours) The course will focus on design of high performance parallel programs for scientific computing. Topics covered include: Single-processor performance, memory hierarchy and pipelines; parallel system organization; message passing and MPI programming; Problem decomposition, graph partitioning, load balancing, Shared memory, CUDA, GPU and OpenMP programming.

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**DEPARTMENT OF MATHEMATICS  
AND STATISTICAL SCIENCES**

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Dr. B. Diatta, Associate Professor  
Dr. R. Gentry, Professor  
Dr. Tor Kwembe, Professor  
Dr. C. Wafo Soh, Professor  
Dr. N. Wang, Associate Assistant Professor  
Dr. Y. Yan, Assistant Professor  
Dr. Z. Zhang, Professor

The Department of Mathematics and Statistical Sciences offers a doctoral degree concentration in computational mathematics and statistical sciences through the College of Science, Engineering and Technology's Ph.D. program in Computational Data-Enabled Sciences and Engineering (CDS&E). The Department also offers programs leading to the MST degree in mathematics designed for persons who wish additional preparation for mathematics teaching or mathematics supervision and the MS degree in Pure or Applied Mathematics for students who seek careers in academia, government, industry or the business sector. The programs are designed for persons with adequate background in undergraduate statistics and mathematics beyond the calculus sequence.

**Program Mission**

In keeping with the mission and vision of the university, the Department of Mathematics and Statistical Sciences aims to equip its graduate with the necessary advanced mathematics and statistical knowledge and skills that prepares them to find solutions to mathematics or statistics problems arising in other academic fields and in areas outside the normal academic setting and to use this knowledge to solve society problems of challenge. The program aims for national and international distinction in preparing mathematics students for a spectrum of careers including academic and non-academic employment.

**Program Objectives**

1. To provide quality mathematics training at the doctoral and master's degree level.
2. To provide a learning and research friendly environment for all students.

3. To prepare students to recognize opportunities for advancing mathematics or statistical ideas arising in other fields.
4. To increase the pool of mathematicians seeking academic and non-academic employment.

**Transfer of Credits**

A course for which transfer credit is sought must have been completed with a grade of "B" or better. Departmental approval is required.

**Time Limit**

Students with adequate mathematics preparation at the undergraduate level will normally take two years to complete any of the Master's degree programs and a minimum of five years to complete the doctoral program. However, all students must complete their programs within eight years of starting coursework at Jackson State University or elsewhere.

**Degree Programs**

CDS&E Ph.D. Program in Computational Mathematics and Statistical Sciences Track

The doctoral program in CDS&E is a research-oriented program that requires a minimum of 72 credit hours beyond the Bachelor's degree or a minimum of 48 credit hours beyond the Master's degree. The program shares resources with the departments and schools offering concentrations in CDS&E and operates under the College of Science, Engineering, and Technology (CSET). The CDS&E program seeks to improve our ability to extract knowledge from large and complex digital data as we meet the national imperative to accelerate discoveries in science and engineering, strengthen our national security and transform teaching and learning. The concentration in Computational Mathematics and Statistical Sciences track is an interdisciplinary program designed to ensure that the student acquires knowledge in a broad spectrum of the mathematics and statistical sciences through quantitative exploration of data. The program of study is structured to reflect the belief that a student in the program should not only be proficient in a specialized track, but also understand how it relates to other academic fields and big data and be able to recognize opportunities for developing new ideas of the track and solve real-world problems. As a result, the Ph.D. graduate in computational mathematics and statistical sciences is equipped with all necessary tools and skills to recognize opportunities for developing and advancing mathematics and statistical ideas arising from many domain fields and for work outside of the traditional mathematics and statistics academic setting. In addition to opportunities for consulting experience through the Laboratory for Interdisciplinary Statistical Analysis through Quantitative Exploration of Data (LISA-QED), students in the track may have opportunities for participation on research projects through other facilities on campus designed for

computational and quantitative simulations, exploration and visualization of data, and make presentations at professional CDS&E conferences.

### **Admission Requirements**

To be considered for admission, the following requirements should be met:

- Applicants must have completed the Graduate Application for Admission.
- Applicants must have provided official copies of transcripts from all colleges/universities attended.
- The applicant must have a Bachelor's or Master's degree from an accredited college or university in a STEM field or related fields, and
- A minimum GPA of 3.00 (on a 4.00 scale) on the highest degree earned.
- A satisfactory TOEFL score for international students whose native language is not English.
- Three letters of recommendation from three professors or professionals knowledgeable of the applicant's professional or academic ability, job experiences, and leadership potential.
- A statement of purpose.

### **Degree Requirements**

Common Core = 12 credit hours

Track Requirement = 12 credit hours

Track electives = 24 credit hours

Dissertation = Not more than 24 credit hours

Please refer to College of Science, Engineering and Technology section of the catalog for all the details regarding the CDS&E Ph.D. degree completion. Students are advised to follow the guidelines given by the Division of Graduate Studies for the completion of the Doctorate degree.

### **Ph.D. Examination Procedures**

- Comprehensive Qualifying Examination (GNST 700)
- Graduate Area Comprehensive Examinations (GNST 888)
- The Dissertation (Thesis)
- Final Defense of Dissertation

### **Comprehensive Qualifying Examination (GNST 700)**

In order to ensure that the skills and basic knowledge have been acquired to carry out the research necessary for the dissertation, the student must demonstrate competence in the common core and concentration track areas. Competence will be demonstrated by a comprehensive qualifying examination which shall consist of written examinations over each of these two areas. The two-part comprehensive qualifying

examination will consist of 3 of the 4 common core courses (CSC 601, CSC 620 and STAT 661 or STAT 672) as Part I and all of the 4 required courses for the chosen track as Part II. A good performance on both Part I and Part II exams will be required for passing. Knowledge of the content of the courses listed in the common core and specialized concentration tracks, such as the typical course sequence listed under each area, should be adequate preparation for the comprehensive qualifying examination. Study guides for each of the examination areas will also be available.

A Comprehensive qualifying examination will normally be scheduled at the beginning of the spring semester and once during the summer. To show satisfactory progress in his/her graduate studies, a student is normally expected to complete his/her comprehensive qualifying examinations by the end of the second full academic year of Ph.D. work or equivalently, completing the common core and concentration track course work. A student will be allowed to repeat an examination only once or as recommended by the faculty advisory committee.

### **Graduate Area Comprehensive Examinations (GACE)**

When the comprehensive qualifying examinations have been passed, the Graduate Advisory Committee is formed. The Doctoral Committee and mentor are selected with the dissertation research topic chosen, and when all course work on the program of study has been completed, the student may request the Graduate Area Comprehensive Examination (GACE) to be scheduled. The GACE will be an examination in the core courses as well as an in-depth examination in the track. It will be administered by the student's doctoral committee and must contain an oral component. Pass or fail will be determined by the majority vote of the committee. The oral component of the examination is open to members of the faculty.

### **The Dissertation**

After the GACE has been passed, the student's doctoral committee will be reconstituted to form the dissertation committee. The student and the major professor of the doctoral committee will select the student's dissertation committee, subject to the approval of the CDS&E Ph.D. Advisory Committee. The dissertation committee will consist of at least five graduate faculty members, including a major professor and at least three additional graduate faculty members from the other concentration tracks, including an external member. The primary responsibility of the committee will be to supervise the student's research and writing of the dissertation in the chosen concentration track, and its members should be chosen with this mission in mind.

In the early stages of the research effort, the student will make a formal dissertation proposal to the dissertation committee. The dissertation will be an original work that makes a significant contribution to the student's area of specialization. An external person who has

expertise in the dissertation area will be enlisted by the student and his/her committee to serve as an external examiner for the dissertation. This person will read the dissertation and submit written comments regarding its quality and significance to the student's committee. It is highly recommended that at least two publications in professionally refereed journals be resulted from the dissertation.

### Final Defense Examination

After all other examinations and the dissertation have been completed, the student's committee will schedule the final defense examination for the student. This examination will consist of an oral defense of the dissertation and will be open to the public.

After consultation with the CDS&E Ph.D. program Coordinator, the major professor will publicize the time and place that the examination will be held. This announcement should be at least one week prior to the scheduled date of the examination.

A pass or fail on this examination will be determined by a majority vote of the student's committee. In making its decision, the committee will give due consideration to the external examiner's assessment of the dissertation and the refereed publications that resulted from the dissertation.

### Master's Degrees

The M.S. degree is essentially a transition to a doctoral program in the mathematical sciences. The M.S. degree and the M.S.T. degree can be completed with only course work; a Thesis or Project is optional. However, all of the programs are designed to meet academic requirements for students who are interested in seeking degrees beyond the master or specialist level.

### Admissions Requirements

Admission to any of the Master's degree program in mathematics requires at least 15 semester hours of undergraduate mathematics above the regular calculus sequence and the fulfillment of the admission requirement into graduate studies at Jackson State University, which is an earned Bachelor's degree with a cumulative GPA of at least 3.0 on the 4.0 scale in all undergraduate courses taken at a regional accredited degree granting institution. GRE is not required for admission into any of the Master's degree programs. However, students who are seeking to pursue the doctoral degree are encouraged to take the GRE exams, general and subject area, to increase their chances for competitive admission and financial assistance. These exams can be taken while students are taking courses or after they have completed all coursework.

### Master of Science in Mathematics

The department offers programs leading to the M.S. degree in Pure or Applied Mathematics for students who plan on pursuing the doctoral degree or wish to seek careers in college or university teaching, government, industry and the business sector. The

programs are designed for persons with adequate background in undergraduate mathematics beyond the calculus sequence.

To receive the M.S. degree a student must be in residence at Jackson State University for at least one semester, complete all degree requirements and must take and pass the Graduate English Competency Exam. If a student's GPA upon completion of all coursework is below 3.33, then such a student is required to take and score at least 70% on a comprehensive exit exam given by the Department.

### The requirements for the M.S. degree are:

1. Thirty six (36) hours are required with a thesis, or thirty three (33) hours with a project, or thirty six (36) hours of course work with a score of 70% on an area comprehensive exam.
2. A "B" average with no more than one "C" grade is required for graduation.
3. Pass the Graduate English Competency Exam

### Required Courses

Course	Title	Semester Hours
Math 513	Modern Linear Algebra 1	3
Math 511	Modern Algebra 1	3
Math 531	Real Analysis 1	3
Math 541	Complex Analysis 1	3
Math 551	Introduction to General Topology 1	3
Math 561	Probability and Statistics I	3
Math 599	Thesis	6
<b>Total Hours</b>		<b>24</b>

A student electing the thesis option, will fulfill the remaining 12 hours from mathematics electives drawn from a list of pure or applied mathematics courses to match his/her area of concentration. Courses are offered each semester to match each enrolled student's interest. In consultation with an advisor and the Chairperson of the Department, a student must develop a study plan and select sufficient electives from departmental courses to complete degree requirements with a concentration in either pure or applied mathematics. See the list of departmental courses below. A typical study plan for a student with a concentration in applied mathematics who is seeking to pursue a doctoral degree would look like this:

### Coursework for Year One

#### Fall Semester

Math 511	Modern Algebra I
Math 513	Modern Linear Algebra I
Math 531	Real Analysis I



### Spring Semester

Math 577	Ordinary Differential Equations with Applications
Math 579	Partial Differential Equations with Applications Math
Math 541	Complex Analysis I

### Summer Sessions

Math 599	Thesis
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### Coursework for Year Two

#### Fall Semester

Math 551	Introduction to General Topology I
Math 542	Complex Analysis 11
Math 532	Real Analysis II
Math 580	Partial Differential Equations 11 or
Math 599	Thesis Extra Coursework and Thesis Defense

#### Spring Semester

Math 537	Introduction to Functional Analysis
Math 547	Integral Equations
Take the GRE both General and Subject area tests	
Math 599	Thesis

### Master of Science in Teaching Mathematics and Science Education

The Mathematics and Science Education degree is a master-level degree offered within the College of Science, Engineering, and Technology under the direction of the Department of Mathematics & Statistical Sciences and in cooperation with the College of Education and Human Development. There are three areas of concentration under the MST. A student can take coursework with concentrations in biology, mathematics or earth sciences. The concentration in mathematics is designed for persons with an adequate background in mathematics and who wish additional preparation for mathematics teaching or mathematics supervision.

#### The requirements for the M.S.T. degree with a concentration in mathematics are:

*The Mathematics and Science and Education degree offers concentrations in one of three areas: biology, mathematics or earth science. Coursework specific to biology and earth science are found within their respective department degree program requirements.*

1. Thirty six (36) hours are required with a thesis; i.e., ten (10) courses and six (6) hours for a thesis.
2. Thirty six (36) hours are required with a project; i.e., eleven (11) courses and three (3) hours for a project.
3. Thirty six (36) hours are required if neither a thesis nor a project is done. All credit hours are completed by coursework.
4. A "B" average with no more than one "C" grade is required for graduation, if a student

has two "C" grades, then the student must earn an "A" grade in an additional course.

5. A maximum of eighteen (18) hours can be counted from education classes.
6. Pass the Graduate English Competency Exam

### Core Educational

Course	Title	Semester Hours
EDFL 511	History and Philosophy of Education (R)	3
EDFL 515	Methods of Educational Research (R)	3
EDFL 514	Elementary Statistics (R*)	3
EDFL 568	Curriculum Methods (R*)	3
<b>Total Hours</b>		12

(R) - Required

(R\*) - Required for students without an undergraduate Statistics course and it is a prerequisite for EDFL 515.

### Required Mathematics Courses

Course	Title	Semester Hours
Math 501	Topics in Geometry	3
Math 506	Basic Concepts for Teachers I	3
Math 510	Topics and Issues in Mathematics	3
Math 513	Linear Algebra 1	3
Math 511	Abstract Algebra 1	3
Math 531	Real Analysis 1	3
<b>Total Hours</b>		18

Any substitute for the above courses must seek the Department of Mathematics and Statistical Sciences' approval.

#### Requirements for Option Choices

- Option 1: Math 590 Thesis 6  
 Option 2: Math 584 Independent Study (Project) 3  
 and a Three hour course selected from List I,  
**Or**  
 Option 3: Three hours selected from List I  
 and three hours selected from List II or List III.

Total number of hours = 36

A student may concentrate in Applied Mathematics by taking the four (4) elective courses from: Math 514, 537, 541, 542, 561, 562, 565, 566, 577, 579, 580, 581, 582, CSC 511, 512, 515, 518, 531 and 561; Foundation of Mathematics by taking from: Math 503, 512, 535, 541, 542, CSC 511, 512, 515, 518, 531 and 561 or graduate level statistics courses.

### List I

1. Math 503 Foundations of Mathematics I
2. Math 504 Foundations of Mathematics II
3. Math 512 Modern Algebra II
4. Math 514 Modern Linear Algebra II
5. Math 532 Real Analysis II
6. Math 541 Complex Analysis I
7. Math 542 Complex Analysis II
8. Math 561 Probability and Statistics I
9. Math 562 Probability and Statistics II
10. Math 551 Introduction to General Topology I
11. Math 552 Introduction to General Topology II
  
12. Math 581 Number Theory I
13. Math 582 Number Theory II

### List II

14. Math 505 Mathematics for Secondary Teachers
15. Math 507 Mathematics Concepts for Teachers II
16. Math 509 Mathematical Structures
17. Math 519 Topics in Mathematics Education I
18. Math 520 Topics in Mathematics Education II

### List III

19. CSC 511 Computers and Programming
20. CSC 512 Introduction to Computer Systems and Organization
21. CSC 515 Data Structures and File Management
22. CSC 518 Principles of Operating Systems
23. CSC 531 Computer Simulation Methods and Models
24. CSC 561 Probability and Statistical Inference I

### Master's Degree in any of the Education Areas with a Concentration in Mathematics Requirements

Students in any of the Master's Degree Programs in the College of Education and Human Development who wish to seek a concentration in Mathematics must meet the following requirements:

1. Satisfaction of the admission requirement in the mathematics graduate programs of three advanced mathematics courses beyond the calculus sequence, or completion of an undergraduate degree program at a regionally accredited institution in Elementary or Secondary Education with a concentration in mathematics.
2. Meet the 18 credit hours requirement in Mathematics as follows:
3. Nine (9) credit hours must be taken from the following courses with a cumulative average of at least a "B": Math 513 -Linear Algebra I, Math 511 - Abstract Algebra I, Math 531 - Real Analysis I or Math 541 -Complex Analysis I.
4. The remaining nine (9) hours can be taken in any combination of the graduate level mathematics education courses and the general mathematics courses.

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## DESCRIPTION OF COURSES

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### Mathematics Education Courses

**MATH 501 Topics in Geometry.** (3 Hours)  
Prerequisite: Approval of department. A survey of geometries and their structures. Emphasis is on both synthetic and analytic methods.

**MATH 502 Topics in Algebra.** (3 Hours) Prerequisite: Approval of department. An amalgamation of classical and modern theory, stressing the synthesis of ideas in areas from equation solvability, special algebraic forms (permutations, combinations, arrangements, binomial and multinomial theorems, partial fractions, progressions, groups, rings, domains of integrity, and ideas of interest).

**MATH 503-504 Foundations of Mathematics I-II** (3-3 Hours): The fundamental elements of set theory and finite mathematical structures; cardinals and ordinals; logical deduction, elements of probability; vectors and matrices, linear programming, theory of games and applications.

**MATH 505 Mathematics for Secondary Teachers** (3 Hours): Prerequisite: Approval of department. The basis of the content, philosophy and methodology employed in the teaching of secondary school mathematics is of prime interest here.

**MATH 506-507 Mathematics Concepts for Teachers I-II** (3-3 Hours): Prerequisite: Approval of department. Higher mathematics for teachers, reviewing the fundamental areas of algebra, geometry and analysis, with stress on rigor and validity of ideas.

**MATH 510 Topics and Issues in Mathematics** (3 Hours): This course is designed for in-service teachers who are interested in the renewal of teaching licenses and the pursuit of graduate studies in the teaching of mathematics. Emphasis is on individualized research dealing with the stages of development of mathematics, new trends in the teaching of mathematics, and the exploration of teaching theories resulting from the work of experimental psychologists such as Piaget, Aushel and Bruner. Because of the individualized nature of the course, students with diverse backgrounds in mathematics can be accommodated.

### Courses for all Graduate Mathematics and CDS&E Majors

**MATH 511-512 Modern Algebra I-II** (3-3 Hours) Groups, (homomorphism), rings, integral domains, modules and fields, elementary linear algebra, number theory.

**MATH 513-514 Modern Linear Algebra I-II** (3-3 Hours) Vector spaces, matrices, linear transformations, determinants and linear equations. Selected topics on eigenvalues, canonical forms, inner products, inner product spaces, bilinear and quadratic forms.

**MATH 515-516 Advanced Modern Algebra III-IV** (3-3 Hours) Prerequisite: Mathematics 512. Special topics in groups, rings and fields, factorization theory, extensions of rings and fields, modules, elementary theory of fields.

**MATH 521-522 Modern Geometry I-II** (3-3 Hours): Prerequisite: Mathematics 511, concurrent enrollment

or approval of department. Historical development; sets and projective planes and geometries; vectors, transformations, axiomatic affine, projective and plane geometry.

**MATH 523-524 Modern Geometry III-IV** (3-3 Hours) Prerequisite: Mathematics 523 or approval of department. Motions and transformations, projective and topological transformations, projective plane, analytic projective geometry; absolute, ordered, affine and hyperbolic geometries; elementary differential geometry, topology of surfaces.

**MATH 525-526 Introduction to Differential Geometry I-II** (3-3 Hours): Prerequisite: Mathematics 523 or approval of department. Curves and surfaces in three dimensions by classical methods, introduction to corresponding problems in  $n$ -dimensions involving tensor methods.

**MATH 527-528 Projective Geometry I-II.** (3-3 Hours) Prerequisite: Mathematics 512 or approval of department. The projective plane, polarities and conic sections, affine geometry, projective metrics, non-Euclidean Geometry, spatial geometry.

**MATH 529-530 Systems Analysis I-II.** (3-3 Hours) Prerequisite: Approval of department. An analysis of the numerical and abstract systems of mensuration. Stress is placed on the metric and English systems, conversion analysis and other systems of interest.

**MATH 531-532 Real Analysis I-II.** (3-3 Hours) Prerequisite: Math 511 or approval of department. Metric spaces, regulated functions and integrals; integrals of Riemann and Lebesgue; trigonometrical and Fourier series; differentiation and Stieltjes Integrals.

**MATH 533-534 Advanced Analysis I-II.** (3-3 Hours) Prerequisite: Mathematics 532 or approval of department. Further treatment of limits, continuity, differentiability and integrability of functions of one and more variables. Infinite series and products, power and trigonometric series; selected topics.

**MATH 535-536 Introduction to Measure and Integration I-II.** (3-3 Hours) Prerequisite: Mathematics 531 or approval of department. Lebesgue measure of linear sets, measurable functions, definite integral, convergence, integration and differentiation, spaces of functions, orthogonal expansions, multiple integrals and the Stieltjes Integral.

**MATH 537-538 Introduction to Functional Analysis I-II.** (3-3 Hours) Prerequisites: Mathematics 512, 531, or approval of department. Fundamentals of the theory of vector spaces; Banach spaces; Hilbert spaces. Linear functional and operators in such spaces; spectral resolution of operators, applications.

**MATH 539-540 Introduction to Infinite Series I-II.** (3-3 Hours) Prerequisites: Mathematics 511 and approval of department. Complex numbers, sets and functions; limits and continuity; analytic functions of a complex variable, elementary functions; integration; power and Laurent series, calculus of residues, conformal representation, special topics.

**MATH 541-542 Complex Analysis I-II.** (3-3 Hours) Complex numbers, sets and functions; limits and continuity; analytic functions of a complex variable,

elementary functions; integration; power and Laurent series, calculus of residues, conformal representation, special topics.

**MATH 544 Introduction to Entire Functions.** (3 Hours) Prerequisite: Mathematics 541. Entire functions, maximum absolute value and order, zeroes of entire functions, fundamental theorem of algebra, Picard's Little Theorem, algebraic relationships and addition theorem; special theorems and functions.

**MATH 545 Laplace Transforms.** (3 Hours) Prerequisites: Math 534 and approval of department. The Stieltjes Integral; fundamental formulae; moment problem, Tauberian theorems, bilateral Laplace Transform, inversion and representation problems, the Stieltjes Transform.

**MATH 546 Special Functions.** (3 Hours) Prerequisites: Math 535 and approval of department. Infinite products, Gamma and Beta functions, series, polynomials, functions, relations and sets of analysis and differential equations.

**MATH 547-548 Integral Equations I-II.** (3-3 Hours) Prerequisites: Math 534, 542, and approval of department. Theory of Fredholm and Volterra equations; Hilbert-Schmidt theory; singular integral equations and some applications.

**MATH 549-550 Methods In Applied Mathematics I-II.** (3-3 Hours) Prerequisite: Approval of department. Elements of linear algebra; applications to systems of linear variables; function spaces; tensor analysis, applications to geometry, electromagnetic theory, Lagrangian and Hamiltonian formulations of mechanics; other topics of interest.

**MATH 551-552 Introduction to General Topology I-II.** (3-3 Hours) Prerequisites: Mathematics 223 and approval of department. Elementary set theory, ordinals and cardinals; topological spaces; cartesian products; connectedness; special topologies; separation axioms; covering axioms, metric spaces; convergence; compactness; function spaces; spaces of continuous functions and complete spaces; homotopy; maps into spheres; topology of  $E^n$ ; homotopy type; introduction to algebraic topological ideas.

**MATH 553-554 Introductory Algebraic Topology I-II.** (3-3 Hours) Prerequisites: Mathematics 552 and approval of department. Complexes, simplicial, singular and Cech Homology Theory. Homotopy groups and basic theorems of algebraic topology.

**MATH 555-556 Introduction to Combinatorial Topology I-II.** (3-3 Hours) Prerequisites: Mathematics 553 and approval of department. Properties of topological spaces; Jordan's theorem, surfaces, complexes, coverings, dimension; the Betti Groups, homology theory, manifolds, the duality theorems, cohomology groups of compacta, introduction to theory of continuous mappings of polyhedra.

**MATH 557-558 Introduction to Algebraic Geometry I-II.** (3-3 Hours) Prerequisites: Mathematics 512, 521, or approval of the department. Algebraic preliminaries, local rings valuation theory, power series, rings, and geometry of algebraic varieties with emphasis on curves and surfaces.

**MATH 559-560 Linear Programming I-II.** (3-3 Hours) Basic Concepts, graph theory, theory of games, Markov Chains, Leontief Economic Models, Optimizing linear functions of variables subject to constraints, a geometric approach, simplex method, convex sets duality, applications.

**MATH 561-562 Probability and Statistics I-II.** (3-3 Hours) Prerequisite: Mathematics 532 or approval of department. Basic concepts of measure theory and integration axiomatic foundations of probability theory, distribution functions and characteristic functions, central limit problem, modern statistical inference, analysis, variance, and decision functions.

**MATH 563-573 Design I-II.** (3-3 Hours) Prerequisite: Mathematics 272. Experimental Design: Completely randomized design; randomized block designs, factorial experiments split plot design, confounding.

**MATH 564 Linear Models.** (3 Hours) Prerequisite: Mathematics 562 or departmental approval. Linear statistical models, some noise-reducing experimental designs, an example-of a volume-increasing design, fitting the general linear model, inference making, multi parameter hypothesis: the analysis of variance, the effect of coding on the analysis, seeking a maximum or minimum response, fractional factorial experiments and incomplete block designs, an example of a completely random model, mixed models.

**MATH 565 Multivariate Analysis.** (3 Hours) Prerequisites: Mathematics 562 and approval of department. General linear hypothesis; least square estimation; confidence regions, multiple comparison; analysis of complete layouts; effects of departures from underlying assumptions. Analysis of covariance.

**MATH 566-566W Operations Research.** (3-3 Hours) Prerequisite: Math 232, 355. Linear programming, network analysis, PERT-CPM, dynamic programming, queuing theory and decision analysis.

**MATH 567-568 Nonparametric Statistics I-II.** (3-3 Hours) Prerequisites: Mathematics 562 and approval of department. Problems of estimating testing hypotheses when the functional form of the underlying distribution is unknown. Robust methods; sign test, rank test and confidence procedures based on these tests; tests based on permutations of observations. Non-parametric tolerance limits; large sample properties of the tests, multi sample problems; ranking methods in analysis of variance; Bivariate and multivariate procedures, efficiency comparisons.

**MATH 569-570 Functions of Several Real Variables I-II.** (3-3 Hours) Prerequisites: Mathematics 533 and approval of department. Euclidean spaces, Mapping and differentials, manifolds, differential forms, vector analysis.

**MATH 571 Numerical Analysis I** (3 Hours): This course is an introduction to parallel computer programming for numerical calculations, round-off error, approximation and interpolation, numerical quadrature, and solution of ordinary differential equations.

**MATH 572 Numerical Analysis II** (3 hrs): This course is a continuation of MATH 625. Topics covered include, iterative solution of systems of nonlinear

equations, evaluation of eigenvalues and eigenvectors of matrices, applications to simple partial differential equations and quantitative exploration of data.

**MATH 573 Fractal Geometry.** (3 Hours) Prerequisite: Math 511 or departmental approval. Metric spaces, equivalent spaces, classification of subsets, and the Space of Fractals. Transformations on metric spaces, contraction mappings, and the Construction of Fractals. Chaotic Dynamics of Fractals, Fractal Dimension. Fractal Interpolation. Julia Sets. Parameter Spaces and Mandelbrot Sets. Measures on Fractals.

**MATH 574 Numerical Linear Algebra.** (3 Hours) Prerequisite: Approval of department. Elementary numerical analysis; matrix algebra; elimination and compact elimination methods; orthogonalization methods; condition, accuracy, and precision; comparison of methods; iterative and gradient methods; iterative and transformation methods for latent roots and vectors; error analysis for latent roots and vectors.

**MATH 575-576 Approximation and Interpolation I-II.** (3-3 Hours) Prerequisite: Approval of department. Interpolation, remainder theory; convergence theorems; infinite interpolation; uniform approximation; best approximation; least squares approximation; Hilbert space; orthogonal polynomials; closure and completeness.

**MATH 577-578 Ordinary Differential Equation I-II.** (3-3 Hours) Ordinary differential equations: basic theorems of existence, uniqueness, and continuous dependence of the solutions; linear differential equations and systems; stability theory; topology of integral curves; differential equations in the complex domain, asymptotic integration; boundary value problems. Partial differential equations; equations of first order method of characteristics, Hamilton-Jacobi theory; equations of second order-classification according to type; elliptic equations-potential equation, maximum principle, characteristics, and other topics of interest.

**MATH 579-580 Partial Differential Equations I-II.** (3-3 Hours) Prerequisite: Mathematics 577 or departmental approval. Linear equations with constant coefficients in two independent variables, applications, eigenfunction expansions, homogeneous and nonhomogeneous equations. Fourier series, existence, solution uniqueness and representation, Initial boundary value problems, Laplace's equation, and special topics.

**MATH 581-582 Number Theory I-II.** (3-3 Hours) Prerequisites: Approval of department. Diophantine analysis, primes, residue classes, theorems of Euler, Fermat, and Wilson, Continued Fractions, Chinese Remainder Theorem, quadratic reciprocity, valuations, extensions of valuations, local and global fields, discriminant.

**MATH 583 Advanced Number Theory.** (3 Hours) Prerequisite: Mathematics 581 or departmental approval. Quadratic and Cyclotomic extensions, elementary class field theory, and selected topics.

**MATH 584 Independent Study.** (3 Hours) Prerequisite: Departmental consent. Intensive study

and research of a subject selected in accordance with student needs and arranged in consultation with the staff. Topics will vary. Student will make periodic reports on his/her reading and will-prepare a scholarly paper on a problem.

**MATH 588-589 Sampling Methods I-II.** (3-3 Hours) Prerequisite: Mathematics 272. Sampling methods: Simple random sampling, sampling for proportions and percentages, estimation of sample size, stratified random sampling ratio estimates.

**MATH 590 Thesis.** (3 Hours) The candidate for the Master of Science in Teaching degree must present a Thesis embodying the results of the research. The candidate chooses the problem, but approval by the adviser is required.

**MATH 599 Thesis.** (3 Hours) The candidate for the Master's degree must present a Thesis embodying the results of the research. The candidate chooses the problem, but approval by the adviser is required.

**MATH 628 Advanced Partial Differential Equations I** (3 Hours): The theory of initial value and boundary value problems for hyperbolic, parabolic, and elliptic partial differential equations, with emphasis on nonlinear equations. Laplace's equation, heat equation, wave equation, nonlinear first-order equations, conservation laws, Hamilton-Jacobi equations, Fourier transform, Sobolev and other spaces, etc.

**MATH 629 Advanced Partial Differential Equations II** (3 Hours): The theory of boundary value and initial value problems for partial differential equations, with emphasis on nonlinear equations. Second-order elliptic equations, parabolic and hyperbolic equations, calculus of variations methods, additional topics selected by instructor.

**MATH 670 Computational Methods in Mathematics I** (3 Hours): This course is designed to give an overview of the design, analysis and implementation of the most fundamental numerical techniques in numerical linear algebra, the interpolation of functions, and the evaluation of integrals. This course in most part will depend on programming with MATLAB and/ or C++. While we present many MATLAB examples throughout the course, students are strongly advised to have some previous programming experience in any computer programming language.

**MATH 671 Computational Methods in Mathematics II** (3 Hours): This course is a continuation of MATH 770. Topics covered includes introduction to mathematical and computational problems arising in the context of molecular biology. Theory and applications of combinatorics, probability, statistics, geometry, and topology to problems ranging from sequence determination to structure analysis. The course depends on parallel and distributed programming.

**MATH 673 Quantitative Exploration of Data** (3 Hours): This course covers how to analyze and mine data with the Structured Query Language (SQL). Understand SQL fundamentals, and then advance into the uses of SQL data analysis and data mining with real applications. Learn to use Microsoft Excel to further

analyze, manipulate and present your data exploration and data-mining findings in tabular and graphical formats. Students will be exposed to Extreme Science and Engineering Discovery Environment (XSEDE).

**MATH 700 Mathematical and Statistical Applications** (3 Hours): The course may be repeated for credit. It covers current trends and challenges of mathematical and statistical applications in CDS&E.

**MATH 827 Numerical Solution of Differential Equations** (3 Hours): Ordinary differential equations: Runge-Kutta and predictor-corrector methods; stability theory, Richardson extrapolation, stiff equations, boundary value problems. Partial differential equations: stability, accuracy and convergence, Von Neumann and CFL conditions, finite difference solutions of hyperbolic and parabolic equations. Finite differences and finite element solution of elliptic equations

**STAT 661 Advanced Probability and Statistics** (3 Hours): Prerequisite: Mathematics 532 or approval of department. Basic concepts of probability theory, distribution functions and characteristics functions, central limit problem, modern statistical inference, analysis, variance, and decision functions.

**STAT 672 Computational Statistics** (3 Hours): Prerequisite: Departmental approval. This course covers R, SAS, SPSS, S-Plus, Mathematica, computational statistics packages and other big data statistical computational packages with emphasis on reading, manipulating, summarizing and modeling data and implementations of simulation through random number generating, Monte Carlo method and bootstrapping.

**STAT 680 Computational Data Analysis and Visualization I** (3 Hours): This course is about learning the fundamental computing skills necessary for effective data analysis.

**STAT 681 Computational Data Analysis and Visualization II** (3 Hours): This course covers exploratory and objective data analysis methods applied to the physical, engineering, and biological sciences.

**STAT 800 Mathematical and Statistical Applications** (3 Hours): Prerequisite: STAT 272 or approval of department. This course covers basic probability theory, common probability distributions, point and interval estimations, hypothesis testing, non-parametric tests, ANOVA as well as their applications.

#### **Dissertation Course**

**CDSE 899 Dissertation Research** (Variable 1-9 Hours): Dissertation representing independent and original research in the area of Computational Mathematics and Statistical Sciences. Prerequisite: permission of advisor.

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### **GRADUATE ENGINEERING PROGRAM**

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The Graduate Engineering Program includes both M.S. and Ph.D. degrees in engineering. Enrolled students may specialize in one or more of the eight areas of

emphasis including: Civil Engineering, Environmental Engineering, Geological Engineering, Coastal Engineering, Computer Engineering, Computational Engineering, Electrical Engineering, or Telecommunications Engineering.

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**DEPARTMENT OF CIVIL &  
ENVIRONMENTAL ENGINEERING AND  
INDUSTRIAL SYSTEMS & TECHNOLOGY**

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Dr. W. Zheng, Professor  
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Dr. K. Wen, Assistant Professor  
Dr. J. Huey, Adjunct Faculty  
Dr. M. Yassin, Adjunct Faculty  
Dr. G. Anderton, Adjunct Faculty  
Dr. R. Moser, Adjunct Faculty  
Dr. C. Weiss, Adjunct Faculty  
Dr. L. Lin, Adjunct Faculty  
Dr. G. Savant, Adjunct Faculty  
Dr. Carlos Gonzales, Adjunct Faculty

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**DEPARTMENT OF ELECTRICAL &  
COMPUTER ENGINEERING AND  
COMPUTER SCIENCE**

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Dr. S. Alibadi, Northrup Grumman Professor  
Dr. A. Eldek, Associate Professor  
Dr. M. A. Manzoul, Professor  
Dr. S. Tu, Professor  
Dr. G. Morris, Adjunct Professor

**Master of Science in Engineering**

**Program Mission**

Jackson State University offers course work leading to the Master of Science in Engineering through the Graduate Engineering Program in collaboration with the Department of Civil and Environmental Engineering and Industrial Systems and Technology, and the Department of Electrical & Computer

Engineering and Computer Science. Engineering students may pursue a MS degree with emphasis in Civil Engineering, Environmental Engineering, Geological Engineering, Computer Engineering, Computational Engineering, Electrical Engineering, or Telecommunications Engineering. The Programs offers a non-degree admission for engineers in the Jackson area who are only interested in continuing engineering education or desire preparation for the Professional Engineering (PE) Exam.

One objective of the Graduate Engineering Program is to meet the post-graduate engineering educational needs of individuals in the greater Jackson metro area who are employed full time. The curriculum is designed not only to meet individual needs, but to provide courses that upgrade the technical skills of employees in private industry, and municipal, state and federal agencies. Classes are typically taught in the evenings to accommodate the working student. The Graduate Engineering Program provides an environment that accommodates full time graduate engineering students who plan to pursue careers in engineering practice, research or academia

**Admission Requirements**

Admission is open to applicants with an undergraduate degree in engineering. Applicants with an undergraduate degree in a closely related field may be considered. Engineering applicants may be admitted to the Graduate School as Regular Graduate Students, Qualifying Students, Conditional Students or Non-Degree Students. Admission requirements for each of these categories are outlined in the JSU Graduate Catalog. Applicants may have to satisfy undergraduate coursework prerequisites as determined by their Department Chairperson and/or Advisor.

Applicants must also submit three (3) letters of recommendations and must meet all other admission requirements outlined in the Jackson State University Graduate Catalog. In addition, international applicants must submit all documentation as outlined in the Graduate Catalog. All applicants must comply with the admission date deadlines of The Division of Graduate Studies.

**Transfer of Graduate Credit**

Engineering Graduate students may transfer up to 9 semester hours of graduate credit from another institution upon the recommendation of their advisor and approval by the Department Chairperson.

**Time Limit**

All course work applied toward a Master of Science Degree in Engineering must be completed within an 8-calendar year period from the date of first entering the graduate program.

**Degree Requirements**

Thirty (30), or thirty-six (36), semester hours are required for the Master of Science Degree in Engineering depending upon which of the following

three options the student selects with approval of his or her department chairperson and/or advisor:

- Option 1** Twenty four (24) semester hours of coursework plus a six-hour thesis
  - Option 2** Twenty seven (27) semester hours of coursework plus a three-hour project
  - Option 3** Thirty six (36) semester hours of coursework
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- Option 1** Requires a formal written thesis, formal presentation and oral exam.
  - Option 2** Requires a written project report, formal presentation and oral exam.
  - Option 3** Requires an oral exam.

To remain in “good standing,” students must maintain a minimum cumulative grade point average (GPA) of 3.0 (“B” average).

**Core Courses**

Each emphasis area has either three or four core courses (9 to 12 semester hours). Electives are selected with approval of the student’s graduate committee and/or graduate advisor.

*Note:* Please refer to the Department of Computer Science for admission and degree requirements, as well as emphasis areas, core courses and description of all courses for the Master of Science in Computer Science.

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**Civil Engineering Emphasis**

**Mission**

To provide graduate learning opportunities in civil engineering for acquiring the knowledge, skills and attitudes necessary for practice and life-long professional development; to contribute to the expansion of knowledge of civil engineering through research programs; and to provide professional and community service to the state, the nation, and the world.

**Program Objectives**

1. Provide the depth and breathe in civil engineering topics necessary for civil engineering practice and development.
2. Provide graduate education in specialized civil engineering areas.
3. Contribute to the discovery of new knowledge and methods that enhance the theory and practice of civil engineering; and engage in meaningful service activities.
4. Provide an environment that promotes professional development, growth of the intellect, character, and spirit of students, faculty, and staff.

**Program Requirements**

The students are required to select three courses among the list of core courses. The three courses must be approved by the Department prior to selection. The remaining courses may be chosen from the list of electives or from the other core courses with the approval of the student’s advisor.

**Core Courses**

<b>Course</b>	<b>Title</b>	<b>Semester Hours</b>
CIV 530	Advanced Pavement Analysis and Design	3
CIV 531	Traffic Engineering	3
CIV 532	Pavement Materials and Design	3
CIV 540	Advanced Structural Analysis	3
CIV 541	Structural Dynamics	3
CIV 542	Advanced Design of Concrete Structures	3
CIV 550	Engineering Hydrology	3
CIV 551	Advanced Fluid Mechanics	3
CIV 652	Hydraulic Engineering Design	3
CIV 672	Advanced Geomechanics	3
CIV 673	Advanced Foundation Engineering	3
CIV 674	Soil Dynamics	3

**Elective Courses**

CIV 520	Advanced Engineering Analysis I	3
CIV 521	Advanced Engineering Analysis II	3
CIV 533	Evaluation, Maintenance, and Rehabilitation of Public Works Infrastructure	3
CIV 534	Urban Transportation Engineering System Design	3
CIV 535	Pavement Design	3
CIV 536	Highway Engineering	3
CIV 543	Advanced Mechanics of Materials	3
CIV 544	Advanced Design of Steel Structures	3
CIV 545	Advanced Design of Wood and Masonry Structures	3
CIV 552	GIS Applications in Civil and Environmental Engineering	3
CIV 553	Experimental Methods in Civil Engineering	3
CIV 554	Water Resources Engineering Planning and Management	3
CIV 556	Groundwater Engineering	3
CIV 557	Computational Fluid Dynamics	3
CIV 558	Sedimentation and River Engineering	3
CIV 559	Environmental Hydraulics	3

CIV 562	Hazardous Waste Engineering	3
CIV 564	Surface Water	3
CIV 565	Wetland Management for Environmental Engineering	3
CIV 567	Environmental Remediation	3
CIV 568	Land Disposal of Waste	3
CIV 571	Principles of Geo-environmental Engineering	3
CIV 572	Applied Geotechnical Engineering Design	3
CIV 578	Applied Geophysics	3
CIV 631	Linear Theory of Ocean Waves	3
CIVL 631	Linear Theory of Ocean Waves' Laboratory	1
CIV 632	Tides and Long Waves	3
CIV 633	Airport Planning and Design	3
CIV 640	Finite Element Method	3
CIV 642	Prestressed Concrete Design	3
CIV 645	Plates and Shells	3
CIV 650	Small Watershed Hydrology	3
CIV 653	Advanced Design of Hydraulic Structures	3
CIV 654	Water Resources Systems Engineering	3
CIV 655	Stochastic Hydrology	3
CIV 659	Advanced Topics in Water Resource Engineering	1-4
CIV 663	Design of Environmental Engineering Facilities	3
CIV 670	Rock Mechanics	3
CIV 675	Earth Dams and Slopes	3
CIV 676	Tunneling	3
CIV 677	Design and Construction with Geosynthetics	3
CIV 678	Soil Bioengineering	3
CIV 679	Advanced Topics in Geotechnical Engineering	1-4
CIV 680	Unsaturated Soil Mechanics	3
CIV 681	Excavation Support Systems and Retaining Structures	3
CIV 682	Computational Geotechnics	3
CIV 683	Soil Structure Interactions	3
CIV 684	Advanced Site Characterization and Instrumentation	3
CIV 695	Scientific Writing Seminar	1
CIV 696	Seminar	1
CIV 697	Internship	1-3
CIV 698	Independent Study	1-4
CIV 699	Thesis Research	1-6

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**Environmental Engineering Emphasis**

**Mission**

To provide engineers and scientists with advanced graduate education in the broad areas of environmental engineering

**Program Objectives**

1. Provide students an understanding of fundamental scientific and engineering principles necessary to manage and solve environmental challenges in natural and engineered systems
2. Provide advanced course work and research programs in environmental engineering
3. Enable students to develop increased professional competence in the broad areas of environmental engineering

**Core Courses**

Course	Title	Semester Hours
CIV 561	Chemistry for Environmental Engineering	3
CIV 562	Hazardous Waste Engineering	3
CIV 660	Physicochemical Processes in Water and Wastewater	3
CIV 661	Biological Processes in Wastewater Engineering	3

**Elective Courses**

CIV 520	Advanced Engineering Analysis I	3
CIV 521	Advanced Engineering Analysis II	3
CIV 550	Engineering Hydrology	3
CIV 551	Advanced Fluid Mechanics	3
CIV 552	GIS Applications in Civil and Environmental Engineering	3
CIV 560	Environmental Engineering II	3
CIV 563	Microbiology for Environmental Engineering	3
CIV 564	Surface Water	3
CIV 565	Wetland Management for Environmental Engineering	3
CIV 566	Air Pollution and Control	3
CIV 567	Environmental Remediation	3
CIV 568	Land Disposal of Waste	3
CIV 569	Environmental Systems Modeling	3
CIV 571	Principles of Geo-environmental Engineering	3
CIV 573	Environmental Geology for Engineers	3
CIV 574	Engineering Hydrogeology	3
CIV 575	Applied Geological Engineering	3
CIV 631	Linear Theory of Ocean Waves	3
CIVL 631	Linear Theory of Ocean Waves' Laboratory	1
CIV 632	Tides and Long Waves	3
CIV 650	Small Watershed Hydrology	3
CIV 652	Hydraulic Engineering Design	3
CIV 653	Advanced Design of Hydraulic Structures	3
CIV 663	Design of Environmental	3



	Engineering Facilities	
CIV 664	Limnology for Environmental Engineering	3
CIV 665	Environmental Law	3
CIV 666	Advanced Waste Treatment Processes in Environmental Engineering	3
CIV 667	Biological Process Engineering	3
CIV 668	Bioenvironmental Engineering	3
CIV 669	Advanced Topics in Environmental Engineering	1-4
CIV 680	Unsaturated Soil Mechanics	3
CIV 681	Excavation Support Systems and Retaining Structures	3
CIV 682	Computational Geotechnics	3
CIV 683	Soil Structure Interactions	3
CIV 684	Advanced Site Characterization and Instrumentation	3
CIV 695	Scientific Writing Seminar	1
CIV 696	Seminar	1
CIV 697	Internship	1-3
CIV 698	Independent Study	1-4
CIV 699	Thesis Research	1-6

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### Coastal Engineering Emphasis

#### Mission

To provide engineers with graduate education in the specialized field of coastal engineering, including knowledge, skills and abilities to address coastal engineering challenges arising from coastal natural disasters.

#### Program Objectives

1. Provide students an understanding of the fundamental coastal engineering knowledge and principles necessary to address engineering challenges in a coastal environment, especially those arising from coastal natural disasters.
2. Provide graduate course work and research programs in coastal engineering.
3. Enable students to achieve enhanced professional development and to appreciate the technical and societal challenges existing in the practice of coastal engineering.

#### Program Requirements

The students are required to select four courses among the list of seven core courses and one of the four must be CIV 520. The other three core courses must be approved by the Department prior to selection. The remaining courses may be chosen from the list of electives or from the other core courses with approval of the student's advisor.

#### Core Courses

Course	Title	Semester Hours
CIV 520	Advanced Engineering Analysis I	3
CIV 538	Coastal Structures	3
CIV 539	Advanced Coastal Engineering Design	3

CIV 558	Sedimentation and River Engineering	3
CIV 631	Linear Theory of Ocean Waves Theory	3
CIV 632	Tides and Long Waves	3
CIV 636	Spectral Wave Analysis	3
CIV 637	Advanced Design for Breakwater Rehabilitation	3

#### Elective Courses

Course	Title	Semester Hours
CIV 521	Advanced Engineering Analysis II	3
CIV 530	Advanced Pavement Analysis and Design	3
CIV 531	Traffic Engineering	3
CIV 532	Pavement Materials and Design	3
CIV 533	Evaluation, Maintenance, & Rehabilitation of Public Works Infrastructure	3
CIV 534	Urban Transportation Engineering System Design	3
CIV 540	Advanced Structural Analysis	3
CIV 541	Structural Dynamics	3
CIV 542	Advanced Design of Concrete Structures	3
CIV 550	Engineering Hydrology	3
CIV 551	Advance Fluid Mechanics	3
CIV 552	GIS Applications	3
CIV 553	Environmental. Methods in Civil Engineering	3
CIV 554	Water Resources Engineering Planning and Management	3
CIV 556	Groundwater Engineering	3
CIV 557	Computational Fluid Dynamics	3
CIV 558	Sedimentation and River Engineering	3
CIV 559	Environmental Hydraulics	3
CIV 562	Hazardous Waste Engineering	3
CIV 564	Surface Water	3
CIV 632	Tides and Long Waves	3
CIV 633	Airport Planning and Design	3
CIV 640	Finite Element Method	3
CIV 650	Small Watershed Hydrology	3
CIV 652	Hydraulic Engineering Design	3
CIV 659	Advanced Topics in Water Resources Engineering	1-4
CIV 670	Rock Mechanics	3
CIV 680	Unsaturated Soil Mechanics	3
CIV 681	Excavation Support Systems and Retaining Structures	3
CIV 682	Computational Geotechnics	3
CIV 683	Soil Structure Interactions	3
CIV 684	Advanced Site Characterization and Instrumentation	3
CIV 695	Scientific Writing Seminar	3
CIV 696	Seminar	3
CIV 697	Internship	1-3
CIV 698	Independent Study	1-4
CIV 699	Thesis Research	1-6

**Geological Engineering Emphasis**

**Mission**

To provide a high quality graduate education in the traditional and emerging areas of geological engineering which is locally responsive; to contribute to the expansion of knowledge of geological engineering through programs of basic and applied research; and to provide professional and community service to the state, the nation, and the world.

**Program Objectives**

1. Provide a graduate education in the broad area of geological engineering fundamentals.
2. Provide academic education and real world design experiences to prepare students for practice in the geological engineering profession.
3. Make contributions to the advancement of knowledge in geological engineering; and engage in meaningful service activities.
4. Create and maintain an environment that promotes professional development, growth of the intellect, character, and spirit of students, faculty and staff.

**Core Courses**

Course	Title	Semester Hours
CIV 570	Regional Geological Engineering	3
CIV 571	Principles of Geo-environmental Engineering	3
CIV 575	Applied Geological Engineering	3
CIV 673	Advanced Foundation Engineering	3

**Elective Courses**

CIV 520	Advanced Engineering Analysis I	3
CIV 521	Advanced Engineering Analysis II	3
CIV 552	GIS Applications in Civil and Environmental Engineering	3
CIV 564	Surface Water	3
CIV 565	Wetland Management for Environmental Engineering	3
CIV 567	Environmental Remediation	3
CIV 568	Land Disposal of Waste	3
CIV 572	Applied Geotechnical Engineering Design	3
CIV 573	Environmental Geology for Engineers	3
CIV 574	Engineering Hydrogeology	3
CIV 578	Applied Geophysics	3
CIV 579	Engineering Seismology	3
CIV 670	Rock Mechanics	3
CIV 671	Advanced Topics in Geological Engineering	1-4
CIV 672	Advanced Geo-mechanics	
CIV 674	Soil Dynamics	3

CIV 675	Earth Dams and Slopes	3
CIV 676	Tunneling	3
CIV 677	Design and Construction with Geosynthetics	3
CIV 678	Soil Bioengineering	3
CIV 679	Advanced Topics in Geotechnical Engineering	1-4
CIV 680	Unsaturated Soil Mechanics	3
CIV 681	Excavation Support Systems and Retaining Structures	3
CIV 682	Computational Geotechnical	3
CIV 683	Soil Structure Interactions	3
CIV 684	Advanced Site Characterization and Instrumentation	3
CIV 695	Scientific Writing Seminar	1
CIV 696	Seminar	1
CIV 697	Internship	1-3
CIV 698	Independent Study	1-4
CIV 699	Thesis Research	1-6

#Note: At least two courses must be selected among CIV 573, CIV 574, CIV 576, CIV 577, CIV 579 and CIV 671. In addition, at least one course must be selected among CIV 578, CIV 670, CIV 672, CIV 674, CIV 675, CIV 677 and CIV 679.

**Electrical Engineering Emphasis**

**Mission**

Provide students with a solid foundation in electrical engineering, knowledge of technical specialty areas, and an appreciation for collaborative problem solving in order to make significant contributions to the profession.

**Program Objectives**

1. Provide students with a solid foundation in electrical engineering (EE), EE practices; and major design skills
2. to maintain high employability, adaptability to changing technologies, and an ability to conceive new technologies and innovative solutions to EE challenges
3. Provide graduates with effective communication skills required for career advancement;
4. Endow students with a sense of professionalism, professional ethics and active participation in the affairs of the profession;
5. Enable students to work effectively in a team environment.

**Core Courses**

Course	Title	Semester Hours
CPE 551	Digital Signal Processing	3
CPE 555	Control Systems	3
CPE 560	Embedded Design With Microprocessors	3
CPE 635	Advanced Circuit Theory	3

### Elective Courses

CPE 503	Computational Methods	3
CPE 515	Advanced Logic Design	3
CPE 520	Advanced Engineering Analysis I	3
CPE 521	Advanced Engineering Analysis II	3
CPE 530	VLSI Design	3
CPE 531	VLSI Testing and Design for Testability	3
CPE 532	Digital Integrated Circuit Design	3
CPE 536	Solid State Electronics	3
CPE 539	Lasers	3
CPE 544	Electromagnetic Field Analysis	3
CPE 556	Systems Theory	3
CPE 557	Robotics	3
CPE 571	Engineering Foundations of Biomedical Engineering	3
CPE 573	Biomedical Instrumentation	3
CPE 575	Biomaterials	3
CPE 655	Advanced Control Systems	3
CPE 693	Advanced Topics in Engineering	1-4
CPE 695	Scientific Writing Seminar	1
CPE 696	Seminar	1
CPE 697	Internship	1-3
CPE 698	Independent Study	1-4
CPE 699	Thesis Research	1-6

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### Computer Engineering Emphasis

#### Mission

Provide a solid foundation in the design and implementation of computer systems emphasizing the development of both software and hardware. Provide an outstanding educational program that enables graduates to have a solid background in both theoretical and practical aspects of Computer Engineering in order to prepare them to make meaningful contributions to their profession. Provide an outstanding educational program that enables our graduates to become leaders in their profession by imparting fundamental principles, skills, and tools necessary to innovate and excel in engineering practice, research or academia.

#### Program Objectives

1. Afford students the opportunity for in-depth study of Computer Engineering concepts and theories
2. Provide state-of-the-art applications and implementations in the design of computer-based systems
3. Provide graduates with effective communications skills required for career advancement
4. Endow students with a sense of professionalism, professional ethics and active participation in the affairs of the profession
5. Engage faculty and graduate students in meaningful Computer Engineering research
6. Promote professional development and growth of students and faculty

### Core Courses

Course	Title	Semester Hours
CPE 508	Operating Systems	3
CPE 512	Computer Architecture	3
CPE 515	Advanced Logic Design	3
CPE 541	Computer Networks	3

### Elective Courses

CPE 500	Software Engineering	3
CPE 505	Analysis of Algorithms	3
CPE 520	Advanced Engineering Analysis I	3
CPE 521	Advanced Engineering Analysis II	3
CPE 530	VLSI Design	3
CPE 531	VLSI Testing and Design for Testability	3
CPE 532	Digital Integrated Circuit Design	3
CPE 533	Fault-Tolerant Computing Systems	3
CPE 547	Modeling and Analysis of Computer and Communication Systems	3
CPE 552	Computer Vision	3
CPE 555	Control Systems	3
CPE 557	Robotics	3
CPE 560	Embedded Design with Microprocessors	3
CPE 601	Code Optimizations	3
CPE 610	Parallel Computing and Programming	3
CPE 611	Computer Arithmetic	3
CPE 630	Design Automation of VLSI Systems	3
CPE 640	Computer Security	3
CPE 641	Advanced Computer Networks	3
CPE 642	Computer Network Security	3
CPE 655	Advanced Control Systems	3
CPE 693	Advanced Topics in Engineering	1-4
CPE 695	Scientific Writing Seminar	1
CPE 696	Seminar	1
CPE 697	Internship	3
CPE 698	Independent Study	1-4
CPE 699	Thesis Research	1-6

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### Telecommunications Engineering Emphasis

#### Mission

To provide quality education to prepare students to play a significant role in shaping the future telecommunication's environment, and to provide knowledge and skills necessary to foster life-long learning.

#### Program Objectives

1. Provide students with both theoretical and practical foundations of telecommunications engineering
2. Engage faculty and students in research endeavors in telecommunications hardware, software, and systems

3. Promote professional development and growth of students and faculty
4. Produce graduates with effective communications skills required for career advancement
5. Endow students with a sense of professionalism, professional ethics and active participation in the affairs of the profession

### Program Objectives

1. Develop computational systems for the solution of physical problems in engineering and science.
2. Develop algorithms and software required for the mathematical models of physical processes.
3. Visualize, analyze, and interpret computed results and other physical data.

Core Courses		Semester
Course	Title	Hours
CPE 540	Telecommunication Systems	3
CPE 541	Computer Networks	3
CPE 543	Wireless Communication Systems	3
CPE 551	Digital Signal Processing	3

### Elective Courses

CPE 500	Software Engineering	3
CPE 502	Telecommunication Software Design	3
CPE 520	Advanced Engineering Analysis I	3
CPE 521	Advanced Engineering Analysis II	3
CPE 534	Coding Theory	3
CPE 542	Computer and Network Security	3
CPE 545	Antennas	3
CPE 546	Digital Communication Systems	3
CPE 643	Wireless Networks	3
CPE 644	Optical Communication Systems	3
CPE 645	Microwave Circuits and Systems	3
CPE 646	Global Positioning Systems and Location Services	3
CPE 647	Mobile Computing Systems	3
CPE 648	Wireless Sensor Networks	3
CPE 649	Telecommunications Network Management	3
CPE 670	Wireless Design Laboratory	3
CPE 671	3G and 4G Wireless Networks	3
CPE 672	Network Quality Assurance and Simulation	3
CPE 673	Wireless Internet Application Development	3
CPE 693	Advanced Topics in Engineering	1-4
CPE 695	Scientific Writing Seminar	1
CPE 696	Seminar	1
CPE 697	Internship	1-3
CPE 698	Independent Study	1-4
CPE 699	Thesis Research	1-6

Core Courses		Semester
Course	Title	Hours
CPE 503	Computational Methods	3
CPE 520	Advanced Engineering Analysis I	3
CPE 521	Advanced Engineering Analysis II	3
CPE 618	High Performance Computing	3

### Elective Courses

CPE 500	Software Engineering	3
CPE 505	Analysis of Algorithms	3
CPE 508	Operating Systems	3
CPE 512	Computer Architecture	3
CPE 515	Advanced Logic Design	3
CPE 530	VLSI Design	3
CPE 531	VLSI Testing and Design for Testability	3
CPE 532	Digital Integrated Circuit Design	3
CPE 533	Fault-Tolerant Computing Systems	3
CPE 541	Computer Networks	3
CPE 547	Modeling and Analysis of Computer and Communication Systems	3
CPE 552	Computer Vision	3
CPE 555	Control Systems	3
CPE 557	Robotics	3
CPE 560	Embedded Design with Microprocessors	3
CPE 601	Code Optimizations	3
CPE 610	Parallel Computing and Programming	3
CPE 611	Computer Arithmetic	3
CPE 630	Design Automation of VLSI Systems	3
CPE 640	Computer Security	3
CPE 641	Advanced Computer Networks	3
CPE 642	Computer Network Security	3
CPE 655	Advanced Control Systems	3
CPE 693	Advanced Topics in Engineering	1-4
CPE 695	Scientific Writing Seminar	1
CPE 696	Seminar	1

### Computational Engineering Emphasis

It is essential for engineers to be skillful in computational technologies. Emergence of high-performance computing has created a third mode of scientific investigation. Computational simulation now joins theoretical analysis and physical experimentation as tools for discovering new knowledge.

CPE 697	Internship	1-3
CPE 698	Independent Study	1-4
CPE 699	Thesis Research	1-6

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## **Doctor of Philosophy (Ph.D.) in Engineering**

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### **Program Description**

The Ph.D. in Engineering Program consists of 8 emphasis areas including Computer Engineering, Telecommunications Engineering, Electrical Engineering, Computational Engineering, Civil Engineering, Coastal Engineering, Environmental Engineering, and Geological Engineering.

### **Mission**

To provide students with the necessary advanced knowledge, research skills, creativity, ethics, critical thinking, and problem solving to be able respond to engineering challenges and needs of our ever-changing world for professional competence and life-long and inquiry-based learning.

### **Objectives**

The primary educational objective of the Ph.D. in Engineering Program is to produce engineers with terminal degrees to meet the needs for highly educated engineers with advanced technical and research skills in the workforces. The specific objectives of the seven emphasis areas are as following:

Civil Engineering: to prepare students for continued professional and scholarly development consistent with their technical interests in civil engineering by conducting a major independent and original research study with critical thinking.

Coastal Engineering: to prepare students with advanced knowledge and skills in coastal engineering, (including coastal natural disasters) and produce graduates with competencies in advanced original research, education and professional practice in coastal engineering.

Environmental Engineering: to equip students with advanced knowledge and skills in the environmental engineering field and produce graduates with competencies in advanced original research, education, and professional practice in the area of environmental engineering.

Geological Engineering: to train students with advanced knowledge and scholarly development in geological engineering and produce graduates with competency in advanced original research in the area of geological engineering.

Computer Engineering: to equip students with

advanced knowledge in computer engineering and produce graduates with competencies in advanced original research, education, and professional practice in computer engineering.

Telecommunications Engineering: to equip students with advanced knowledge in telecommunications engineering and produce graduates with competencies in advanced original research, education, and professional practice in telecommunications engineering.

Electrical Engineering: to equip students with advanced knowledge in electrical engineering and produce graduates with competencies in advanced original research, education, and professional practice in electrical engineering.

Computational Engineering: to equip students with advanced knowledge in computational engineering and produce graduates with competencies in advanced original research, education, and professional practice in computational engineering.

### **Admission Requirements**

The applicants must meet all admission requirements set by the Division of Graduate Studies. In addition, the applicants must meet the following admission requirements.

1. A Bachelor of Science (B.S.) degree in civil engineering, environmental engineering, computer engineering, or electrical engineering or closely related engineering disciplines from accredited colleges and universities, or a Master of Science (M.S.) in related engineering field.
2. Applicants who do not have a B.S. or M.S. in an engineering field will be required to satisfy the articulation courses.
3. Minimum undergraduate grade point average (GPA) of 3.0 on a 4.0 scale and minimum graduate GPA of 3.50 on a 4.0 scale are required. In special cases, exceptional applicants with B.S. degrees in engineering will be considered. These applicants must have a minimum GPA of 3.5
4. Applicants with Minimum undergraduate grade point average (GPA) of 2.90 on a 4.0 scale and minimum graduate GPA of 3.250 on a 4.0 scale may be considered for conditional admission. These applicants must achieve a minimum graduate GPA of 3.50 during the first year of the Ph.D. Program to be eligible for consideration for regular admission.
5. International students must meet the English requirements as outlined by the Division of Graduate Studies.

6. Applicant must submit three letters of recommendation from professionals who are knowledgeable with applicant's credentials.
7. Applicant must submit a one-page statement on career goals and objectives, as well as research experience and interests.

### **Degree Requirements**

The applicants must meet all degree requirements set by the Division of Graduate Studies. In addition, the applicants must meet the following degree requirements.

To obtain the Ph.D. in Engineering Degree, the students are required to complete a minimum of 72 credit hours beyond B.S. or 36 credit hours beyond M.S. degree. The program includes core courses, elective courses, and 24 hours of dissertation research. The adviser or the advising committee may recommend additional courses based on the students background and proposed research plan. Students have to maintain a graduate GPA of 3.0 or above to avoid academic probation.

A comprehensive qualifying exam is given to the student after six months of the study beyond the M.S. degree, but no later than after 2 years of study. Academic advisor and engineering faculty in a student's area of research determine the coursework needed for a student to prepare for the comprehensive qualifying examination. The comprehensive qualifying examination includes a written part and oral exam. During the comprehensive qualifying examination, students must demonstrate a sufficient depth and breadth of knowledge in their major to pursue independent and original research. However, the student must consult with their advisor and/or the exam coordinator in the major area of study for the schedule and specific procedures. A signature form, verifying that a student has passed the comprehensive qualifying exam, must be signed by the student's advisor and returned to the departmental office. After passing the comprehensive qualifying exam, the students will be admitted to Ph.D. Candidacy. If a student fails to pass the comprehensive qualifying exam, he/she will be allowed to take it again between one and six months after the first attempt. If the student fails twice on this exam, he/she will be dropped from the PhD program.

When at least 80% of coursework is completed and the comprehensive qualifying exam is successfully passed, the students are able to take a preliminary exam administered by the advising committee and academic advisor. Students should take the preliminary exam within 3 years of residence beyond the MS degree and at least two semesters before their final dissertation defense. This exam is based upon an oral exam and a written proposal and a detailed plan to carry out the Ph.D. dissertation. Students must consult with their advisors for specific details of the requirements for the preliminary exam.

The defense of dissertation is the final exam of the Ph.D. program. An oral defense and a written Ph.D. dissertation demonstrating original and independent

research and major contributions to an engineering field have to be approved by the advising committee before graduation. Recognizing the importance of high quality graduates, each graduate is expected to publish at least 2 papers based on the results of his/her research in high quality refereed engineering journals. A summary of minimum degree requirements is shown below.

### **Summary of Minimum Degree Requirements for Ph.D. in Engineering**

#### **Credit Hours**

A minimum of 72 credit hours beyond B.S. or 36 credit hours beyond M.S. degree. Must complete 24 hours of dissertation research, the required core courses, and elective courses. The adviser or the advising committee may recommend additional courses based on the students background and the proposed research area.

#### **Comprehensive Qualifying Exam**

Successful completion of written and oral Comprehensive Qualifying Exam, given after six months of the study beyond the M.S. degree, but no later than after 2 years of study.

#### **Preliminary Exam**

Successful completion of the preliminary exam within 3 years of residence beyond the MS degree and at least two semesters before their final dissertation defense.

#### **Final Dissertation and Defense**

An oral defense and a written Ph.D. dissertation demonstrating original independent research and major contributions. Each graduate is expected to publish at least 2 papers based on the results of his/her research in high quality refereed engineering journals.

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**Program:** Ph.D. in Engineering  
**Emphasis area:** Civil Engineering  
**Department:** Civil and Environmental Engineering

#### **Core Courses**

1. Choose three from the following list after consultation and approval of the student's adviser.

<b>Course</b>	<b>Title</b>	<b>Semester Hours</b>
CIV 530	Advanced Pavement Analysis and Design	3
CIV 531	Traffic Engineering	3
CIV 532	Pavement Materials and Design	3
CIV 540	Advanced Structural Analysis	3
CIV 541	Structural Dynamics	3
CIV 542	Advanced Design of Concrete Structures	3
CIV 550	Engineering Hydrology	3
CIV 551	Advanced Fluid Mechanics	3

CIV 652	Hydraulic Engineering Design	3
CIV 672	Advanced Geomechanics	3
CIV 673	Advanced Foundation Engineering	3
CIV 674	Soil Dynamics	3

2. In addition, each student is required to take one graduate level advanced mathematics course after consultation and approval of the student's adviser.

#### Elective Courses

CIV 520	Advanced Engineering Analysis I	3
CIV 521	Advanced Engineering Analysis II	3
CIV 533	Evaluation, Maintenance, & Rehabilitation of Public Works Infrastructure	3
CIV 534	Urban Transportation Engineering System Design	3
CIV 535	Pavement Design	3
CIV 536	Highway Engineering	3
CIV 543	Advanced Mechanics of Materials	3
CIV 544	Advanced Design of Steel Structures	3
CIV 545	Design of Wood and Masonry Structures	3
CIV 552	GIS Applications in Civil and Environmental Engineering	3
CIV 553	Experimental Methods in Civil Engineering	3
CIV 554	Water Resources Engineering Planning and Management	3
CIV 556	Groundwater Engineering	3
CIV 557	Computational Fluid Dynamics	3
CIV 558	Sedimentation and River Engineering	3
CIV 559	Environmental Hydraulics	3
CIV 562	Hazardous Waste Engineering	3
CIV 564	Surface Water	3
CIV 565	Wetland Management for Environmental Engineering	3
CIV 567	Environmental Remediation	3
CIV 568	Land Disposal of Waste	3
CIV 571	Principles of Geoenvironmental Engineering	3
CIV 572	Applied Geotechnical Engineering Design	3
CIV 578	Applied Geophysics	3
CIV 631	Linear Theory of Ocean Waves	3
CIVL 631	Linear Theory of Ocean Waves' Laboratory	1
CIV 632	Tides and Long Waves	3
CIV 633	Airport Planning and Design	3
CIV 640	Finite Element Method	3
CIV 642	Prestressed Concrete Design	3

CIV 645	Plates and Shells	3
CIV 650	Small Watershed Hydrology	3
CIV 653	Advanced Design of Hydraulic Structures	3
CIV 654	Water Resources Systems Engineering	3
CIV 655	Stochastic Hydrology	3
CIV 659	Advanced Topics in Water Resources Engineering	1-4
CIV 663	Design of Environmental Engineering Facilities	3
CIV 670	Rock Mechanics	3
CIV 675	Earth Dams and Slopes	3
CIV 676	Tunneling	3
CIV 677	Design and Construction with Geosynthetics	3
CIV 678	Soil Bioengineering	3
CIV 679	Advanced Topics in Geotechnical Engineering	1-4
CIV 680	Unsaturated Soil Mechanics	3
CIV 681	Excavation Support Systems and Retaining Structures	3
CIV 682	Computational Geotechnics	3
CIV 683	Soil Structure Interactions	3
CIV 684	Advanced Site Characterization and Instrumentation	3
CIV 695	Scientific Writing Seminar	1
CIV 696	Seminar	1
CIV 697	Internship	1-3
CIV 698	Independent Study	1-4

**Program:** PhD in Engineering

**Emphasis Area:** Coastal Engineering

**Department:** Civil and Environmental Engineering and Industrial Systems and Technology

#### Core Courses

1. Choose four from the following list (CIV 520 is mandatory) after consultation with and approval of the student's adviser.

Course	Title	Semester Hours
CIV 520	Advanced Engineering Analysis I	3
CIV 538	Coastal Structures	3
CIV 539	Advanced Coastal Engr. Design	3
CIV 558	Sedimentation and River Engr.	3
CIV 631	Linear Theory of Ocean Waves	3
CIV 632	Tides and Long Waves	3
CIV 636	Spectral Wave Analysis	3
CIV 637	Advanced Design for Breakwater Rehabilitation	3

**Elective Courses**

Course	Title	Semester Hours
CIV 521	Advanced Engineering Analysis II	3
CIV 530	Advanced Pavement Analysis and Design	3
CIV 531	Traffic Engineering	3
CIV 532	Pavement Materials and Design	3
CIV 533	Evaluation, Maintenance, & Rehabilitation of Public Works Infrastructure	3
CIV 534	Urban Transportation Engineering System Design	3
CIV 540	Advanced Structural Analysis	3
CIV 541	Structural Dynamics	3
CIV 542	Advanced Design of Concrete Structures	3
CIV 550	Engineering Hydrology	3
CIV 551	Advance Fluid Mechanics	3
CIV 552	GIS Applications	3
CIV 553	Environmental. Methods in Civil Engineering	3
CIV 554	Water Resources Engineering Planning and Management	3
CIV 556	Groundwater Engineering	3
CIV 557	Computational Fluid Dynamics	3
CIV 558	Sedimentation and River Engr.	3
CIV 559	Environmental Hydraulics	3
CIV 562	Hazardous Waste Engineering	3
CIV 564	Surface Water	3
CIV 633	Airport Planning and Design	3
CIV 640	Finite Element Method	3
CIV 650	Small Watershed Hydrology	3
CIV 652	Hydraulic Engineering Design	3
CIV 659	Advanced Topics in Water Resources Engineering	1-4
CIV 670	Rock Mechanics	3
CIV 680	Unsaturated Soil Mechanics	3
CIV 695	Scientific Writing Seminar	3
CIV 696	Seminar	3
CIV 697	Internship	1-3
CIV 698	Independent Study	1-4
CIV 899	Dissertation Research	1-6

**Program:** Ph.D. in Engineering  
**Emphasis Area:** Environmental Engineering  
**Department:** Civil and Environmental Engineering

**Core Courses**

1. Choose three from the following list after consultation and approval of the student's adviser.

Course	Title	Semester Hours
CIV 561	Chemistry for Environmental Engineering	3
CIV 562	Hazardous Waste Engineering	3
CIV 660	Physiochemical Processes in Water and Wastewater	3
CIV 661	Biological Processes in Wastewater Engineering	3

2. In addition, each student is required to take one graduate level advanced mathematics course after consultation and approval of the student's adviser.

Elective Courses		Semester Hours
Course	Title	Hours
CIV 520	Advanced Engineering Analysis I	3
CIV 521	Advanced Engineering Analysis II	3
CIV 550	Engineering Hydrology	3
CIV 551	Advanced Fluid Mechanics	3
CIV 552	GIS Applications in Civil and Environmental Engineering	3
CIV 558	Sedimentation and River Engineering	3
CIV 560	Environmental Engineering II	3
CIV 563	Microbiology for Environmental Engineering	3
CIV 564	Surface Water	3
CIV 565	Wetland Management for Environmental Engineering	3
CIV 566	Air Pollution and Control	3
CIV 567	Environmental Remediation	3
CIV 568	Land Disposal of Waste	3
CIV 569	Environmental Systems Modeling	3
CIV 571	Principles of Geoenvironmental Engineering	3
CIV 573	Environmental Geology for Engineers	3
CIV 574	Engineering Hydrogeology	3
CIV 575	Applied Geological Engineering	3
CIV 631	Linear Theory of Ocean Waves	3
CIV 631L	Linear Theory of Ocean Waves' Laboratory	1
CIV 632	Tides and Long Waves	3
CIV 650	Small Watershed Hydrology	3



CIV 652	Hydraulic Engineering Design	3	<b>Elective Courses*</b>		<b>Semester Hours</b>
CIV 653	Advanced Design of Hydraulic Structures	3	CIV 520	Advanced Engineering Analysis I	3
CIV 663	Design of Environmental Engineering Facilities	3	CIV 521	Advanced Engineering Analysis II	3
CIV 664	Limnology for Environmental Engineering	3	CIV 552	GIS Applications in Civil and Environmental Engineering	3
CIV 665	Environmental Law	3	CIV 564	Surface Water	3
CIV 666	Advanced Waste Treatment Processes in Environmental Engineering	3	CIV 565	Wetland Management for Environmental Engineering	3
CIV 667	Biological Process Engineering	3	CIV 567	Environmental Remediation	3
CIV 668	Bioenvironmental Engineering	3	CIV 568	Land Disposal of Waste	3
CIV 669	Advanced Topics in Environmental Engineering	1-4	CIV 572	Applied Geotechnical Engineering Design	3
CIV 680	Unsaturated Soil Mechanics	3	CIV 573	Environmental Geology for Engineers	3
CIV 681	Excavation Support Systems and Retaining Structures	3	CIV 574	Engineering Hydrogeology	3
CIV 682	Computational Geotechnics	3	CIV 576	Geological Engineering Analysis	3
CIV 683	Soil Structure Interactions	3	CIV 577	Airphoto Interpretation for Terrain Evaluation	3
CIV 684	Advanced Site Characterization and Instrumentation	3	CIV 578	Applied Geophysics	3
CIV 695	Scientific Writing Seminar	1	CIV 579	Engineering Seismology	3
CIV 697	Internship	1-3	CIV 670	Rock Mechanics	3
CIV 698	Independent Study	1-4	CIV 671	Advanced Topics in Geological Engineering	1-4

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**Program:** Ph.D. in Engineering  
**Emphasis Area:** Geological Engineering  
**Department:** Civil and Environmental Engineering

**Core Courses**

1. Choose three from the following list after consultation and approval of the student's adviser.

<b>Course</b>	<b>Title</b>	<b>Semester Hours</b>
CIV 570	Regional Geological Engineering	3
CIV 571	Principles of Geoenvironmental Engineering	3
CIV 575	Applied Geological Engineering	3
CIV 673	Advanced Foundation Engineering	3

2. In addition, each student is required to take one graduate level advanced mathematics course after consultation and approval of the student's adviser.

CIV 672	Advanced Geomechanics	3
CIV 674	Soil Dynamics	3
CIV 675	Earth Dams and Slopes	3
CIV 676	Tunneling	3
CIV 677	Design and Construction with Geosynthetics	3
CIV 678	Soil Bioengineering	3
CIV 679	Advanced Topics in Geotechnical Engineering	1-4
CIV 680	Unsaturated Soil Mechanics	3
CIV 681	Excavation Support Systems and Retaining Structures	3
CIV 682	Computational Geotechnics	3
CIV 683	Soil Structure Interactions	3
CIV 684	Advanced Site Characterization and Instrumentation	3
CIV 696	Seminar	1
CIV 697	Internship	1-3
CIV 698	Independent Study	1-4

<sup>a</sup>Note: At least two courses must be selected among CIV 573, CIV 574, CIV 576, CIV 577, CIV 579, or CIV 671. In addition, at least one course must be selected among CIV 578, CIV 670, CIV 672, CIV 674, CIV 675, CIV 676, CIV 677, or CIV 679.

**Program:** Ph.D. in Engineering  
**Emphasis Areas:**  
 (1) Computer Engineering  
 (2) Telecommunications Engineering  
 (3) Electrical Engineering  
 (4) Computational Engineering  
**Department:** Electrical & Computer Engineering

**Core Courses**

The required four core courses are:

Core Course	Title	Semester Hours
CPE 503	Computational Methods	3
CPE 520	Advanced Engineering Analysis I	3
CPE 521	Advanced Engineering Analysis II	3
CPE 635	Advanced Circuit Theory	3

Elective Course	Title	Semester Hours
CPE 500	Software Engineering	3
CPE 502	Telecommunication Software Design	3
CPE 503	Computational Methods	3
CPE 505	Analysis of Algorithms	3
CPE 508	Operating Systems	3
CPE 512	Computer Architecture	3
CPE 515	Advanced Logic Design	3
CPE 520	Advanced Engineering Analysis I	3
CPE 521	Advanced Engineering Analysis II	3
CPE 530	VLSI Design	3
CPE 531	VLSI Testing and Design for Testability	3
CPE 532	Digital Integrated Circuit Design	3
CPE 533	Fault-Tolerant Computing Systems	3
CPE 534	Coding Theory	3
CPE 536	Solid State Electronics	3
CPE 539	Lasers	3
CPE 540	Telecommunication Systems	3
CPE 541	Computer Networks	3

CPE 542	Computer and Network Security	3
CPE 543	Wireless Communication Systems	3
CPE 544	Electromagnetic Field Analysis	3
CPE 545	Antennas	3
CPE 546	Digital Communication Systems	3
CPE 547	Modeling and Analysis of Computer and Communication Systems	3
CPE 551	Digital Signal Processing	3
CPE 552	Computer Vision	3
CPE 555	Control Systems	3
CPE 556	Systems Theory	3
CPE 557	Robotics	3
CPE 560	Embedded Design with Microprocessors	3
CPE 571	Engineering Foundations of Biomedical Engineering	3
CPE 573	Biomedical Instrumentation	3
CPE 575	Biomaterials	3
CPE 601	Code Optimizations	3
CPE 610	Parallel Computing and Programming	3
CPE 611	Computer Arithmetic	3
CPE 618	High Performance Computing	3
CPE 630	Design Automation of VLSI Systems	3
CPE 635	Advanced Circuit Theory	3
CPE 640	Computer Security	3
CPE 641	Advanced Computer Networks	3
CPE 642	Computer Network Security	3
CPE 643	Wireless Networks	3
CPE 644	Optical Communication Systems	3
CPE 645	Microwave Circuits and Systems	3
CPE 646	Global Positioning Systems and Location Services	3
CPE 647	Mobile Computing Systems	3
CPE 648	Wireless Sensor Networks	3

CPE	Telecommunications	
649	Network Management	3
CPE	Advanced Control Systems	
655		3
CPE	Wireless Design	
670	Laboratory	3
CPE	3G and 4G Wireless	
671	Networks	3
CPE	Network Quality	
672	Assurance and Simulation	3
CPE	Wireless Internet	
673	Applications Development	3
CPE	Advanced Topics in	
693	Engineering	1-4
CPE	Scientific Writing Seminar	
695		1
CPE	Seminar	
696		1
CPE	Internship	
697		1-3
CPE	Independent Study	1-4
698		

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## DESCRIPTION OF COURSES

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### CIV Courses

**CIV 520 Advanced Engineering Analysis I.** (3 Hours) A comprehensive course to familiarize engineering professionals with advanced applied mathematics as it relates to solving practical engineering problems. The course of intensive study blends the theoretical underpinnings of advanced applied mathematics with an understanding of how these powerful tools can be used to solve practical engineering problems. The material covered includes Ordinary Differential Equations; Linear Algebra, Vector Calculus; Fourier Analysis and Partial Differential Equations.

**CIV 521 Advanced Engineering Analysis II.** (3 Hours) A comprehensive course to familiarize engineering professions with advanced applied mathematics as it relates to solving practical engineering problems. The course of intensive study blends the theoretical use of advanced applied mathematics with an understanding of how these powerful tools can be used to solve practical engineering problems. The material covered includes Complex Analysis; Numerical Methods; Optimization; Graphs; and Probability and Statistics.

**CIV 530 Advanced Pavement Analysis and Design.** (3 Hours) Development of models for and analysis of pavement systems; use of transfer functions relating pavement response to pavement performance; evaluation and application of current pavement design practices and procedures; analysis of the effects of maintenance activities on pavement performance; and economic evaluation of highway and airport pavements. Prerequisite: CIV 475 or permission of Department.

**CIV 531 Traffic Engineering.** (3 Hours) Study of fundamentals of traffic engineering; analysis of traffic stream characteristics; capacity of urban and rural

highways; design and analysis of traffic signals and intersection; traffic control; traffic impact studies; and traffic accidents. Prerequisite: CIV 390 or permission of Department.

**CIV 532 Pavement Materials and Design.** (3 Hours) Properties and control testing of bituminous materials, aggregates for bituminous mixtures, and analysis and design of asphalt, concrete and liquid asphalt cold mixtures; structural properties of bituminous mixes; surface treatment design; and recycling of mixtures. Introduction to Superpave mix design and applications. Prerequisite: CIV 390 or permission of Department.

**CIV 533 Evaluation, Maintenance, and Rehabilitation of Public Works Infrastructure.** (3 Hours) Evaluation, maintenance, and rehabilitation of deteriorated infrastructure systems by considering live cycle costs and long-term performance. Understanding rehabilitation alternatives used in the practical field and designing rehabilitation based on the nondestructive testing methods and economical considerations. Prerequisite: CIV 390 and CIV 475. (Cross Reference: CIV 479)

**CIV 534 Urban Transportation Engineering System Design** (3 Hours) Advanced design of highway systems, vehicle and driver characteristics, highway capacity, design of urban streets and expressways. Design constraints. Individual and team design projects oriented toward the solution of local urban transportation problems, societal and economical considerations. Prerequisite: CIV 390, CIV 310 and CIVL 310 or permission of Department. (Cross reference: CIV 470)

**CIV 535 Pavement Design.** (3 Hours) Aggregate, binder systems. Theory and design of pavement structures, rigid and flexible pavement designs, subgrade materials, pavement management, nondestructive testing, pavement maintenance, design constraints, infrastructure maintenance, major design project. Prerequisite: CIV 380 and CIV 390. (Cross reference: CIV 475)

**CIV 536 Highway Engineering.** (3 Hours) Analysis of factors in developing highway transportation facilities; traffic estimates and assignment; problems of highway geometrics and design standards; planning and location principles; intersection design factors; street systems and terminal facilities; programming improvements; drainage design; structural design of surface; concepts of highway management and finance; and highway maintenance planning. Prerequisite: CIV 390 or permission of Department.

**CIV 538 Coastal Structures** (3 Hours) The types and functions of coastal structures will be studied including, seawalls, groins, revetments, bulkheads, dikes, detached breakwaters, reef breakwaters, storm surge barriers and others. A coastal structure will be assigned to each student to provide the class a lecture to and prepare a term paper on the coastal structure assigned. Determination of the design wave climate for coastal structures is investigated as it pertains to the functional types of coastal structures. Invited guest lecturers will appear as available.

**CIV 539 Advanced Coastal Engineering Design (3 Hours)**

This course provides a comprehensive advanced investigation of the coastal engineering design process. It includes the Planning and Design Process, Site Characterization, Shore Protection Projects, Beach Fill Design, Navigation Projects, Sediment Management at Inlets and Environmental Enhancement. A design project will be assigned to each student to provide the class a power point presentation and to prepare a term paper on the design project assigned. Invited guest design professionals will appear and present lectures as available.

**CIV 540 Advanced Structural Analysis.** (3 Hours) A unified formulation of displacement and force methods of analysis including the topological view of the structure as an assemblage of members; matrix techniques of formulation; considerations for automatic computations; and evaluation of truss, grid, and frame models for the response of real structures. Prerequisite: CIV 320 or permission of Department.

**CIV 541 Structural Dynamics.** (3 Hours) Analysis of the dynamic response of structures and structural components to transient loads and foundation excitation; single-degree-of-freedom and multi-degree-of-freedom systems; response spectrum concepts; simple inelastic structural systems; and introduction to systems with distributed mass and flexibility. Prerequisite: CIV 320 or permission of Department.

**CIV 542 Advanced Design of Concrete Structures.** (3 Hours) Theory and design of reinforced concrete continuous beams, slender columns, two-way-slabs, footings, retaining walls, shear walls and multistory buildings. Design for torsion and design constraints. Framing systems and loads for buildings and bridges, design constraints and a major design project. Prerequisite: CIV 420. (Cross reference: CIV 477)

**CIV 543 Advanced Mechanics of Materials.** (3 Hours) Study of beams under lateral load; beams with combined lateral load and thrust; beams on elastic foundations; applications of Fourier series and virtual work principles to beam-type structures; stress and strain in three dimensions; applications to flexure of beams and plates; elements of the engineering theory of plates; and torsion of thin-walled open sections. Prerequisite: CIV 320 or permission of Department.

**CIV 544 Advanced Design of Steel Structures.** (3 Hours) Behavior and design of members subjected to fatigue, dynamic, combined loading. Methods of allowable design stress, and load resistance factor design. Design of continuous beams, plate girders, composite beams, open-web joists, connections, torsion and plastic analysis and design. Framing systems and loads for industrial buildings and bridges, design constraints and a major design project. Prerequisite: CIV 360. (Cross reference: CIV 476)

**CIV 545 Design of Wood and Masonry Structures.** (3 Hours) Engineering properties and behavior of wood for analysis and design of wooden beams, walls and diaphragms. Engineering properties and behavior of masonry for analysis and design of masonry walls, columns and shear walls. Framing systems and loads

for multistory buildings, design constraints and a major design project. Prerequisite: CIV 420. (Cross reference: CIV 478)

**CIV 550 Engineering Hydrology.** (3 Hours) Principles and theory of surface water and groundwater flow and quality; understanding and determination of water budget, hydrologic cycle, Darcy's law, and water resources management at the watershed scale. Water quality parameters including data analysis and interpretation, laboratory tests, and maintenance of water quality. Applications in engineering design. Prerequisite: CIV 370 or permission of Department.

**CIV 551 Advanced Fluid Mechanics.** (3 Hours) Kinematics of fluid flow; plane irrotational and incompressible fluid flow; Navier-Stokes equations; two-dimensional boundary layers in incompressible flow; dimensional analysis and dynamic similitude; hydrodynamic stability; turbulence; real life problems; Engineering applications and system approach. Prerequisite: CIV 330 or permission of Department.

**CIV 552 GIS Applications in Civil and Environmental Engineering.** (3 Hours) This course introduces students to the basic concepts and skills necessary to engage applied Geographic Information Systems (GIS) with the field of Civil and Environmental Engineering. Students will gain basic theoretical knowledge required for development and successful use of GIS and practical training on use of GIS software. This course will consist of lecture sessions, lab exercises and GIS project. While the principles taught will be general in nature, the students will be taught how to use the ArcView GIS software program, and working through several exercises that emphasize its use in Civil and Environmental Engineering. Selected topics include: GIS analysis procedures, integration of survey control for data acquisition and rectification, hardware software selection criteria, and error propagation analyses, Global Positioning Systems (GPS) and their use with GIS. Prerequisite: permission of the Department.

**CIV 553 Experimental Methods in Civil Engineering.** (3 Hours) Introduction to experimental methods, instrumentation, data acquisition and data processing; experimental aspects of static and dynamic testing in the various areas of civil engineering; overview of laboratory work with several hands-on applications in the laboratory. Prerequisite: permission of Department.

**CIV 554 Water Resources Engineering Planning and Management.** (3 Hours). Managing water resources; the planning process, systems analysis methods; institutional framework for water resources engineering; comprehensive integration of engineering, economic, environmental, legal and political considerations in water resources development and management. Prerequisite: permission of the Department.

**CIV 556 Groundwater Engineering.** (3 Hours) Groundwater hydrology, theory of ground water movement, steady-state flow, potential flow, mechanics of well flow, multiple-phase flow, salt water intrusion, artificial recharge, groundwater

contamination and models. Prerequisite: CIV 370 or permission of Department.

**CIV 557 Computational Fluid Dynamics.** (3 Hours) Finite-difference and finite-volume methods and basic numerical concepts for the solution of dispersion, propagation and equilibrium problems commonly encountered in real fluid flows; theoretical accuracy analysis techniques. Prerequisites: CIV 330 and knowledge of one programming language.

**CIV 558 Sedimentation and River Engineering.** (3 Hours) This course is developed for graduate students who plan to specialize in water resources/coastal engineering. Course covers hydraulics of sediment transport; mechanics of morphology, sediment budget concepts, mathematical modeling of sediment transport. Prerequisite: CIV 330 or Permission of Department.

**CIV 559 Environmental Hydraulics.** (3 Hours) The application of fluid mechanics principles in the analysis of environmental flows. Topics include: stratified flows, turbulent jets and plumes, wastewater and thermal diffusers, cooling ponds and cooling channels and the control of environmental problems. Prerequisites: CIV 330 or permission of Department.

**CIV 560 Environmental Engineering II.** (3 Hours) The physical, chemical, and biological environmental engineering systems that are used to protect health and the environment. Examples include drinking water treatment, wastewater treatment, hazardous waste treatment, and air pollution control. Prerequisite: permission of Department.

**CIV 561 Chemistry for Environmental Engineering.** (3 Hours) The principles of physical, equilibrium, inorganic, and organic chemistry as they apply to drinking water treatment, wastewater treatment, natural water quality, air quality, and air pollution control. Applications in engineering design. Prerequisite: CIV 340, or CIV 560, or permission of Department.

**CIV 562 Hazardous Waste Engineering.** (3 Hours) Comprehensive study of the complex, interdisciplinary engineering principles involved in hazardous waste handling, collection, transportation, treatment, and disposal. Also covered are waste minimization, site remediation, and regulations important for engineering applications. Design constraints, engineering judgment, and ethical responsibility are covered. Contemporary hazardous waste issues and urban issues are also addressed. Prerequisite: CHEM 241, CHML 241, CIV 340, CIVL 340, or permission of Department. (Cross reference: CIV 468)

**CIV 563 Microbiology for Environmental Engineering.** (3 Hours) The microbiological principles that apply to wastewater treatment, drinking water protection, water quality, and disease transmission. Applications in engineering design. Prerequisite: CIV 560 or permission of Department.

**CIV 564 Surface Water.** (3 Hours) Water quantity, water quality, regulation of, and management of rivers, lakes, and wetlands. Applications in engineering design. Prerequisite: permission of Department.

**CIV 565 Wetland Management for Environmental Engineering.** (3 Hours) The physical, chemical,

biological, and regulatory aspects of wetland ecosystems. The impacts of engineered structures on wetland systems, and the factors involved with developing specifications for wetland creation and restoration. Prerequisite: permission of Department.

**CIV 566 Air Pollution and Control.** (3 Hours) The sources of and engineering principles to prevent or control air pollution and to design and operate processes. Topics include the risks of air pollution to which the public is exposed, the principle and factor underlying the generation of pollutants, physical principles describing how pollution affects the atmosphere and human well-being, regulations which engineers will be expected to understand and comply with. The engineering aspects including principles governing pollutant production from stationary and mobile combustion systems, modeling of the generation and transport of pollutants in the atmosphere, methods for separation and removal of gases and particulates from a process gas stream. Prerequisite: permission of Department.

**CIV 567 Environmental Remediation.** (3 Hours) The course covers current engineering solutions for the remediation of soils and waters contaminated by hazardous waste or spills. The technologies to be covered include bioremediation, oxidation, soil vapor extraction, soil washing, surfactant-enhanced remedy, thermal treatment, air stripping, solidification/stabilization, electro kinetic decontamination, underground barriers, permeable reactive treatment walls, and other newly-emerging technologies. The engineering principles behind the remediation technologies are emphasized. Examples of successful applications of the remediation technologies are discussed. Prerequisite: permission of Department.

**CIV 568 Land Disposal of Waste.** (3 Hours) Theoretical, regulatory, and practical aspects of the disposal of waste on lands. Decontamination and reclamation of lands contaminated by industrial activities and spills of industrial chemicals. The usefulness and environmental impact of the disposal of municipal and industrial wastes via land treatment and land filling. Design considerations and engineering problems associated with the land disposal of septic tank effluent, municipal garbage, sewage sludge, sewage effluent, industrial and hazardous waste, and radioactive wastes. Prerequisite: permission of Department.

**CIV 569 Environmental Systems Modeling.** (3 Hours) Mathematical modeling of environmental systems, including rivers, lakes, estuaries, and air. Prerequisite: permission of Department.

**CIV 570 Regional Geological Engineering.** (3 Hours) Geological engineering problems unique to specific geomorphic and physiographic regions based on terrain, rock type, and geologic structure will be addressed. Examples will be presented to show how site-specific conceptual geologic models are necessary for successful engineering design in unique geologic regions of the United States. Prerequisite: permission of Department.

**CIV 571 Principles of Geoenvironmental Engineering.** (3 Hours) Topics in geoenvironmental engineering in an urban environment, landfill design and incineration options. Stability of landfills, geotechnical characteristics of landfills, liner systems. Waste characterization, minimization, collection, treatment, transport and disposal. Leachate characteristics and potential groundwater contamination, design constraints. Legal and ethical considerations. Prerequisite: permission of Department. (Cross reference: CIV 471)

**CIV 572 Applied Geotechnical Engineering Design.** (3 Hours) Practical real life urban projects and advanced laboratory experience in geotechnical engineering, construction dewatering, construction issues, safety and economy, urban geotechnical engineering issues, preparation of subsurface investigation and geotechnical engineering reports, ethical considerations, oral presentation. Pre or co-requisite: CIV 430 or permission of Department. (Cross reference: CIV 472)

**CIV 573 Environmental Geology for Engineers.** (3 Hours) Defines the role of Environmental Geology in the engineering design of remedial activities dealing with a wide range of geotechnical engineering problems. Fundamental concepts of environmental unity and the rising human population will be addressed. Topics will range from earthquakes to coastal processes with particular emphasis on landslides and water problems. Prerequisite: permission of Department.

**CIV 574 Engineering Hydrogeology.** (3 Hours) Defines the role of Hydrogeology in the engineering design of activities dealing with the interaction of ground and surface water. The course will address a wide range of topics including the role of water in earthquakes and landslides, land subsidence, swelling clay foundations, geothermal energy, engineered wetlands, cave and karst formation, contaminant transport, and water resources with emphasis in engineering design. Prerequisite: permission of Department.

**CIV 575 Applied Geological Engineering.** (3 Hours) Applications of geological concepts including geomorphology and structural geology in solving geological engineering problems. Study of engineering principles and properties of earth materials. Exploration during engineering design and methods of site investigations. Applications of instrumentation and equipment used for soil, rock, and water analyses. Prerequisite: permission of Department.

**CIV 576 Geological Engineering Analysis.** (3 Hours) Computer applications to geological engineering, analysis, design, and use of computers for geological engineering projects. Computer-aided engineering facilities and use of general productivity and engineering software. Numerical methods in the solution of geological engineering and related problems. Case study of a complex project and a large-scale engineering analysis. Prerequisite: permission of Department.

**CIV 577 Air-Photo Interpretation for Terrain Evaluation.** (3 Hours) Determination of soil, bedrock, and drainage characteristics of land areas by air-photo interpretation and analysis; physical characteristics of landforms; application of air-photo interpretation for engineering soil surveys, land use suitability evaluation, and land use planning, applications in engineering design. Prerequisite: permission of Department.

**CIV 578 Applied Geophysics.** (3 Hours) Gravity and magnetic theory and methods. Gravitational field of earth and gravity measurements applications to geological engineering problems. Imaging subsurface features of earth using basic principles of physics, namely elastic, electric, magnetic, and density properties of earth material. Applications in engineering design. Prerequisite: permission of Department.

**CIV 579 Engineering Seismology.** (3 Hours) Theory and applications in earthquake seismology, earthquake mechanics, wave propagation, earth structure, instrumentation, interpretation of seismograms, focal mechanisms, faults, paleoseismology, seismotectonics, earthquake locations and magnitudes, selection of ground motion parameters. Applications in engineering design. Prerequisite: permission of Department.

**CIV 631 Linear Theory of Ocean Waves** (3 Hours): Governing equations in free surface flow, deterministic and probabilistic wave theories, wave transformation, wave-induced coastal currents. The formulation and solution of the governing boundary value problem for small amplitude waves are developed and the kinematic and pressure fields for short and long waves are explored. Prerequisite: CIV 330 or Permission of Department

**CIVL 631 Linear Theory of Ocean Waves' Laboratory.** (1 Hour) Laboratory for linear ocean wave theory generation and propagation of linear waves, measurement of wave properties and observation of wave transformations in shallow water.

**CIV 632 Tides and Long Waves.** (3 Hours) A systematic development of the theory of ocean tides, tidal forcing functions, near shore tidal transformations and tidal propagation in harbors and estuaries. An introduction to the response of harbors to long waves and the study of the generation of long ocean waves. Prerequisite: permission of the Department

**CIV 633 Airport Planning and Design.** (3 Hours) Basic principles of airport facilities design to include aircraft operational characteristics, noise, site selection, land use compatibility, operational area, ground access and egress, terminals, ground service areas, airport capacity, and special types of airports. Prerequisite: CIV 390 or permission of Department.

**CIV 636 Spectral Wave Analysis** (3 Hours) Measurement techniques of ocean waves. Introduction and basic concept of wave spectrum. Harmonic analysis and mathematical formulation of wave spectrum. Maximum entropy and maximum likelihood methods. Idealized wave spectral models. Wave energy balance equation and its applications. Nonlinear wave-wave interaction and diffraction. Wave hindcast and

forecast modeling in coastal waters. Prerequisite: CIV 330, CIV 631 or permission of the Department.

**CIV 637 Advanced Design for Breakwater Rehabilitation.** (3 Hours) Advanced analysis and design considerations for breakwaters are investigated for the most complex challenges. These challenges are associated with rehabilitation and/or reconstruction of damaged breakwaters. Design considerations are explored from an analysis of breakwater failures at Sines, Nawiliwili, Kahului and others. Toe design, crest elevation, crown design, core alternatives, runup, overtopping, design waves, head design, constructability and functionality are explored. Prerequisite: permission of Department

**CIV 640 Finite Element Methods.** (3 Hours) Theory and application of the finite element method; stiffness matrices for triangular, quadrilateral, and isoparametric elements; two- and three-dimensional elements; algorithms necessary for the assembly and solutions; direct stress and plate bending problems for static, nonlinear buckling and dynamic load conditions; displacement, hybrid, and mixed models together with their origin in variational methods. Prerequisite: CIV 540 or permission of Department.

**CIV 642 Prestressed Concrete Design.** (3 Hours) Study of strength, behavior, and design of prestressed reinforced concrete members and structures, with primary emphasis on precast, prestressed construction; emphasis on the necessary coordination between design and construction techniques in prestressing. Prerequisite: CIV 420 or permission of Department.

**CIV 645 Plates and Shells.** (3 Hours) Classical bending theory of plates and shells; emphasis on methods of solution including series expansions, finite element and finite difference methods; application of theories to commonly encountered structures in practice; and consideration of in plane loads, large deflections, buckling, and anisotropy. Prerequisite: CIV 640 or permission of Department.

**CIV 650 Small Watershed Hydrology.** (3 Hours) The role of land conditions in dealing with engineering problems of applied hydrology with emphasis on the small watershed, limited data, and land management situations; gain a physically-based understanding of hydrologic processes that define the functions of small watersheds; Effects of natural and human disturbances on the components of the hydrologic cycle; Investigate special characteristics of small watersheds; Approaches for dealing with limited data; Use the understanding of applied hydrology to predict the impacts of various land use activities on terrestrial and aquatic ecosystems; Develop analytic tools to integrate land use and catchment characteristics to predict catchment response and guide watershed management. Topics include stream flow generation, hill slope hydrology, stream channel hydraulics, hydrograph separation, evapotranspiration, hydrologic tracers, riparian zone hydrology, and hyporheic zone hydrology. Applications in engineering design. Prerequisite: CIV 550 or permission of Department.

**CIV 652 Hydraulic Engineering Design.** (3 Hours) Design of water supply and transport systems; Design

and analysis of structures for controlling and conveying water in both the built and natural environment; Engineering applications of hydraulic and hydrologic engineering; Analytic methods and computer models for the design and evaluation of water resource projects such as flood control and river basin development; Common models, and typical applications for water resource systems; Reservoir design, flood routing; and design of water distribution and storm water management systems, and sanitary sewers. Prerequisite: CIV 370 or permission of Department.

**CIV 653 Advanced Design of Hydraulic Structures.** (3 Hours) Analysis and characteristics of flow in open channels (natural and artificial); channel design considerations including uniform flow (rivers, sewers), flow measuring devices (weirs, flumes), gradually varied flow (backwater and other flow profiles, flood routing), rapidly varied flow (hydraulic jump, spillways), and channel design problems (geometric considerations, scour, channel stabilization, sediment transport); analysis and design of hydraulic structures such as dams, spillways etc. based on economic, environmental, ethical, political, societal, health and safety considerations. Prerequisite: CIV 370 or permission of Department. (Cross-Reference: CIV 466)

**CIV 654 Water Resource Systems Engineering.** (3 Hours) Linear and non-linear optimization models and simulation models for planning and management of water systems; single- and multi-objective analysis and deterministic and stochastic techniques. Prerequisites: CIV 554 or permission of the Department.

**CIV 655 Stochastic Hydrology.** (3 Hours) Advanced applications of statistics and probability to hydrology, time series analysis and synthesis, and artificial neural network methods. A combination of theory and application to the field of hydrology, environmental and water resource engineering, climatic modeling and other natural resources modeling. Prerequisites: CIV 550, MATH 307 or permission of the Department.

**CIV 659 Advanced Topics in Water Resource Engineering.** (Variable 1-4 Hours) Course will focus on a variety of topics in the field of water resources engineering. May be repeated for credit. Prerequisite: Permission of the Department.

**CIV 660 Physicochemical Processes in Water and Wastewater Treatment.** (3 Hours) Fundamental principles, analysis, modeling, and design considerations of physical and chemical processes for water and wastewater treatment processes and operations. Drinking water treatment processes will be focused on while parallel wastewater treatment schemes also being discussed. Relevant water quality characteristics, standards, and regulations in engineering design will be reviewed. Prerequisite: CIV 561 or permission of Department.

**CIV 661 Biological Processes in Wastewater Treatment.** (3 Hours) Theory and applications of the biological processes available for the treatment of wastewaters. Fundamentals of biological degradations and transformation of pollutants. Microbial growth kinetics and modeling. Wastewater treatment processes, both aerobic and anaerobic, including

suspended growth biological processes and attached growth processes. Emphasis on engineering design considerations and parameters. Prerequisite: CIV 660.

**CIV 663 Design of Environmental Engineering Facilities.** (3 Hours) Analysis and design considerations and constraints for environmental engineering facilities such as water and wastewater treatment plants, solid and hazardous waste landfills, and resources recovery facilities. Design of municipal wastewater treatment plant including site selection, plant layout, hydraulic profile, preliminary treatment processes (screening, sedimentation, flow equalization, etc.), secondary treatment processes (activated sludge, trickling filter), waste stabilization ponds/constructed wetland), and sludge treatment and disposal (thickening, centrifugation, belt press, anaerobic digestion, thermal process and land disposal). Completion of one major design project and two minor design projects. Prerequisite: CIV 661 or permission of Department. (Cross reference: CIV 460)

**CIV 664 Limnology for Environmental Engineering.** (3 Hours) The study of aquatic ecosystems, with an emphasis on lakes. The physical characteristics of water and lakes; the chemical characteristics of aquatic systems; the dominant plants and animals in lakes, streams, and wetlands. The impacts of pollution, engineered structures, and man-made alterations of lakes and streams. Prerequisite: permission of Department.

**CIV 665 Environmental Law.** (3 Hours) The major federal statutes and regulations that govern environmental protection. Included are the National Environmental Policy Act, the Clean Air Act, the Clean Water Act, Superfund, and others. Prerequisite: permission of Department.

**CIV 666 Advanced Waste Treatment Processes in Environmental Engineering.** (3 Hours) An in-depth study of the biological processes used to treat wastewater, with an emphasis on recently published information. Prerequisite: CIV 661 or permission of Department.

**CIV 667 Biological Process Engineering.** (3 Hours) Applications of the principles of microbial kinetics and heat transfer to the analysis and design of biological engineering processes. Emphasis on applications in environmental engineering processes or projects. Prerequisite: permission of Department.

**CIV 668 Bioenvironmental Engineering.** (3 Hours) Engineering principles for the design of systems for the biological treatment and utilization of organic by-products from animal and crop production and from industrial processes such as food and crop processing industries. Design of best management practices to protect bioenvironmental resources by minimizing non-point pollution (off-site movement of sediment, nutrients and other constituents) and by minimizing nuisance odors associated with land applied organic residues, inorganic fertilizers and pesticides. Economic utilization of beneficial components of typical wastes. Prerequisite: permission of Department.

**CIV 669 Advanced Topics in Environmental Engineering.** (Variable 1-4 Hours) Course will focus on a variety of topics in the field of environmental

engineering. May be repeated for credit. Prerequisite: permission of Department.

**CIV 670 Rock Mechanics.** (3 Hours) Classification of rock masses, stress and strain in rock, elastic and time-dependent behavior of rock, state of stress in rock masses, failure mechanisms, construction applications, geological and engineering applications. Prerequisite: permission of Department.

**CIV 671 Advanced Topics in Geological Engineering.** (Variable 1-4 Hours). Course will focus on a variety of topics in the field of geological engineering. May be repeated for credit. Prerequisite: permission of Department.

**CIV 672 Advanced Geomechanics.** (3 Hours) Theoretical and quasi-theoretical approaches for advanced soil mechanics including stress analysis, consolidation theory, immediate settlement, and saturated and partially saturated soils; problem idealization; introduction to rock mechanics; engineering judgment. Prerequisite: CIV 380 or permission of Department.

**CIV 673 Advanced Foundation Engineering.** (3 Hours) Advanced topics in foundations design, special cases of shallow foundations; horizontal load capacity of pile foundations; battered piles, load calculation of pile groups. Drilled caissons; design and construction of sheet piles including cantilever and anchored sheet piles; earth pressures and stability of retaining structures; design of braced supports, cofferdams; design examples. Prerequisite: CIV 430 or permission of Department.

**CIV 674 Soil Dynamics.** (3 Hours) Study of soil behavior under various dynamic loadings including earthquakes. Laboratory & field techniques for determining dynamic soil properties and liquefaction potential. Factors affecting liquefaction; dynamic soil-structure interaction. Engineering design examples. Prerequisite: CIV 380 or permission of Department.

**CIV 675 Earth Dams and Slopes.** (3 Hours) Stability of natural and man-made slopes under various loading conditions, slope protection. Selection and measurement of pertinent soil parameters. Engineering design and construction of earth dams and embankments. Practical aspects of seepage effects and ground water flow. Flow net and its use; wells; filters; total and effective stress methods of slope analysis. Prerequisite: CIV 380 or permission of Department.

**CIV 676 Tunneling.** (3 Hours) Overview of tunneling practice in rocks and soft ground. Underground construction techniques. Geological aspects and major technical problems in tunneling. Various tunneling methods and selections. Design and support of tunnels in soft ground and rock. Prerequisite: Permission of Department.

**CIV 677 Design and Construction with Geosynthetics.** (3 Hours) Properties and behavior of geosynthetics including geotextiles, geogrids and other fabrics; applications in geotechnical and geo-environmental engineering; quantify hydraulic behavior; applications in remediation, retaining structures, and foundations construction. Prerequisite: permission of Department.



**CIV 678 Soil Bioengineering.** (3 Hours) Engineering practices and ecological principles for the assessment, design, construction and maintenance of living vegetation systems. Slope stabilization against shallow mass movement and erosion through vegetated reinforcement. Root reinforcement, erosion control, aesthetics and environmental factors in engineering design are considered. Prerequisite: permission of Department.

**CIV 679 Advanced Topics in Geotechnical Engineering.** (Variable 1-4 Hours) Course will focus on a variety of topics in the field of geotechnical engineering. May be repeated for credit. Prerequisite: permission of Department.

**CIV 680 Unsaturated Soil Mechanics.** (3 Hours) Introduction of unsaturated soil, stress-state variables, soil water suction and soil water characteristic curves, hydraulic function curves, flow in unsaturated soil, shear strength and slope stability analysis, lateral earth pressure and retaining structures design, and compressibility and volume change analysis for unsaturated soils. Prerequisites: CIV 380 or Departmental Permission.

**CIV 681 Excavation Support Systems and Retaining Structures.** (3 Hours) Earth pressure theory used in the design of temporary and permanent earth retaining structures, guidelines for the selection of retention method, retaining wall design and associated construction issues of gravity walls, concrete retaining walls, MSE wall, sheet pile wall, soldier pile and diaphragm walls, braced and tie back excavation support systems. Prerequisites: CIV 380 or permission of Department.

**CIV 682 Computational Geotechnics.** (3 Hours) Introduction to numerical and finite element modeling, analyses of embankments, earth dams, slopes, excavation support systems including soldier pile and diaphragm walls, shallow and deep foundation systems, and other geo-structures using advanced geotechnical software. Prerequisites: CIV 380 or permission of Department.

**CIV 683 Soil Structure Interactions.** (3 Hours) Introduction to geotechnical earthquake engineering and fundamental understanding of soil behavior under dynamic loading, finite element analysis of soil structure interaction due to dynamic loading and structural response, seismic slope stability analysis, seismic design of retaining wall and buried structures, case studies. Prerequisites: CIV 380 or permission of Department.

**CIV 684 Advanced Site Characterization and Instrumentation.** (3 Hours) In situ test methods, advantages and limitations, SPT, CPT, DCPT, CPTU or piezocone, DMT, pressure meter, shear vane and other field test methods, non-destructive seismic, resistivity, electromagnetic methods, soil property interpretation procedures, geotechnical instrumentation types, monitoring and applications. Prerequisites: CIV 380 or permission of Department.

**CIV 695 Scientific Writing Seminar.** (1 Hour) Exercises in scientific writing format and style, with particular emphasis on writing abstracts and manuscripts for publication in referred archival journals.

**CIV 696 Seminar.** (1 Hour) Presentation of papers, projects and reports by visiting lecturers, graduate students, engineers, and community leaders.

**CIV 697 Internship.** (Variable 1-3 Hours) Supervised graduate internship and externship in various areas. Prerequisite: permission of Department.

**CIV 698 Independent Study.** (Variable 1-4 Hours) Intensive study of a special engineering project including research and literature review selected in accordance with student interests and arranged in consultation with the adviser. Topics will vary. Student will make periodic reports, and will prepare a scholarly paper at the end of semester. Prerequisite: permission of Department.

**CIV 699 Thesis Research.** (Variable 1-6 Hours) Master's thesis representing an independent and original research. Prerequisite: permission of adviser.

**CIV 899 Dissertation Research.** (Variable 1-6 Hours) Dissertation representing independent and original research.

#### CPE Courses

**CPE 500 Software Engineering.** (3 Hours) Examination of the software development life cycle; requirements elicitation; system design; Unified Modeling Language (UML) focus on design; risk analysis; configuration management; testing; maintenance; software project management; team building.

**CPE 502 Telecommunication Software Design.** (3 Hours) Comprehensive course to familiarize telecommunication professionals with the state of the art in software concepts and technologies in modern telecommunications applications; examination of state-of-the-art software concepts and technology in modern telecommunications applications; focus on software process modeling as applied to telecommunications; application of software engineering concepts and processes; user interface design; reusability; reuse; reliability; distributed computing; real-time operating systems; interfacing with Optical/IP Networks; Personal Communication Service (PCS); switch control; heavy emphasis on real world application topics including Optical/IP Network, Intelligent Network (IN) Service Creation, and Cellular/Personal Communication Service (PCS).

**CPE 503 Computational Methods.** (3 Hours) Computational methods for solving problems in engineering analysis; variational methods; finite-difference analysis; optimization methods; finite-difference analysis; matrix methods; focus is on real-world engineering problems; techniques and algorithms for simulating large-scale digital and analog circuits.

**CPE 505 Analysis of Algorithms.** (3 Hours) Mathematical foundations of algorithms and algorithm analysis; sorting and searching algorithms, graph

algorithms, algorithm design techniques, lower bound theory, fast Fourier transforms, NP-completeness.

**CPE 508 Operating Systems.** (3 Hours) Examination of concepts of process communication and synchronization; protection; performance measurement; study of mutual exclusion; concurrent processes; device and memory management; I/O and interrupt structures.

**CPE 512 Computer Architecture.** (3 Hours) Study of architectural features of modern processors, including cache memories and memory systems, pipeline designs, branch prediction techniques; design of superscalar, multithreaded VLIW processors, code optimization for such systems will be studied; quantitative evaluation of architectural features.

**CPE 515 Advanced Logic Design.** (3 Hours) Advanced concepts in Boolean algebra; use of hardware description languages as a practical means to implement hybrid sequential and combinational designs; digital logic simulation; rapid prototyping techniques; design for stability concepts; focuses upon the actual design and implementation of sizeable digital design problems using a representative set of Computer Aided Design (CAD) tools.

**CPE 520 Advanced Engineering Analysis I.** (3 Hours) A comprehensive course to familiarize engineering professionals with advanced applied mathematics as it relates to solving practical engineering problems. The course of intensive study blends the theoretical underpinnings of advanced applied mathematics with an understanding of how these powerful tools can be used to solve practical engineering problems. The material covered includes Ordinary Differential Equations; Linear Algebra, Vector Calculus; Fourier Analysis and Partial Differential Equations.

**CPE 521 Advanced Engineering Analysis II.** (3 Hours) A comprehensive course to familiarize engineering professions with advanced applied mathematics as it relates to solving practical engineering problems. The course of intensive study blends the theoretical un of advanced applied mathematics with an understanding of how these powerful tools can be used to solve practical engineering problems. The material covered includes Complex Analysis; Numerical Methods; Optimization; Graphs; and Probability and Statistics.

**CPE 530 VLSI Design.** (3 Hours) Theory of MOS transistors: fabrication, layout, characterization; CMOS circuit and logic design; circuit and logic simulation, fully complementary CMOS logic, pseudo-NMOS logic, dynamic CMOS logic, pass-transistor logic, clocking strategies; sub system design; ALUs, multipliers, memories, PLAs; architecture design: data path, floor planning, iterative cellular arrays, systolic arrays; VLSI algorithms; chip design and test; full custom design of chips, possible chip fabrication by MOSIS and subsequent chip testing.

**CPE 531 VLSI Testing and Design for Testability.** (3 Hours) Introduction to testing of digital electronic circuits and systems; faults and fault modeling, test equipment, test generation for combinational and

sequential circuits, fault simulation, memory and microprocessor testing, design for testability, built-in self-test techniques, and fault location.

**CPE 532 Digital Integrated Circuit Design.** (3 Hours) Design methodologies for digital systems using a modern hardware description language; algorithmic, architectural and implementation aspects of arithmetic processing elements; design of Complex Instruction Set (CISC), Reduced Instruction Set (RISC), and floating point processors; synthesis, simulation and testing of processors with computer-aided design tools.

**CPE 533 Fault-Tolerant Computing Systems.** (3 Hours) Analysis and design of very high reliability and availability systems; fault types, reliability techniques, and maintenance techniques; case studies of high-availability long-life, life-critical systems; both hardware and software techniques for achieving fault-tolerance will be studied.

**CPE 534 Coding Theory.** (3 Hours) Introduction to linear codes; error detection and correction; bounds on the error correction capabilities of codes; Hamming distance code; linear block codes; syndrome decoding of linear block codes; cyclic codes; error trapping; decoding; burst error correcting codes; convolutional codes with threshold, sequential and viterbi decoding; cyclic random error correcting codes; P-N sequences; cyclic and convolutional burst error correction codes; other coding conceptions and implementations.

**CPE 536 Solid State Electronics.** (3 Hours) This course explores the electronic properties of semiconductor and related materials used in modern day devices. For common semiconductor devices, operation, electrical characteristic, manufacturing and applications are covered.

**CPE 539 Lasers.** (3 Hours) Review of electromagnetic theory; ray tracing in an optical system; Gaussian beam propagation; resonant optical cavities; study of excitation and laser mechanisms in gas and semiconductor lasers.

**CPE 540 Telecommunication Systems.** (3 Hours) Preparatory course for all subsequent graduate work in telecommunications; theoretical and technical foundation for the analysis and design of communications systems; use of classical and modern mathematical analysis techniques, including Fourier Series and Fourier Transform; classical modulation techniques (amplitude, frequency, phase).

**CPE 541 Computer Networks.** (3 Hours) Study of computer network architectures, protocols, and interfaces; OSI reference model; Internet architecture; networking techniques (multiple access, packet/cell switching, and internetworking); end-to-end protocols; congestion control; high-speed networking; network management.

**CPE 542 Computer and Network Security.** (3 Hours) In-depth examination of computer and network security; coverage of encryption, public/private keys, certificates, security of wired and wireless communication systems; invasion and intrusion techniques and detection; security architectures; network and computer risk analysis; biometrics and their application to computer security will be examined.

**CPE 543 Wireless Communication Systems.** (3 Hours) Principles of mobile communication systems; models of wave propagation; compensation for fading; modulation, demodulations; coding, encoding; multiple-access techniques; performance characteristics of mobile systems; wireless device characteristics; low-power mobile devices; wireless communication system design; mobile and cell antenna designs.

**CPE 544 Electromagnetic Field Analysis.** (3 Hours) Maxwell's equations; solutions of Laplace's equation; Green's Function; scalar and vector potentials; energy and momentum in electromagnetic fields; interaction of fields and material media.

**CPE 545 Antennas.** (3 Hours) Examine the theory and properties of various communication antennas covering the range from RF frequencies to millimeter wavelengths; examine actual antennas and their characteristics.

**CPE 546 Digital Communication Systems.** (3 Hours) Maxwell's equations; numerical propagation of scalar waves; numerical implementation of boundary conditions; absorbing boundary conditions for free space and waveguides; selected applications in telecommunications, antennas, microelectronics, digital systems.

**CPE 547 Modeling and Analysis of Computer and Communication Systems.** (3 Hours) Modeling of single and multiprocessor systems, single and multi-stage interconnection networks, computer networks; analysis using Stochastic processes, Markov and Queuing techniques; modeling using Petri Nets and Finite State models.

**CPE 551 Digital Signal Processing.** (3 Hours) Signals and systems; sampling continuous-time signals and reconstructions of continuous-time signals from samples; spectral analysis of signal using the discrete Fourier transform; the fast Fourier transform and fast convolution methods; z-transforms; finite and infinite impulse response filter design techniques; signal flow graphs and introduction to filter implementation.

**CPE 552 Computer Vision.** (3 Hours) Examination of information processing approaches to computer vision; algorithms and architectures for artificial intelligence and robotic systems capable of vision; inference of three-dimensional properties of a scene from its images, such as distance, orientation, motion, size and shape, acquisition and representation of spatial information for navigation and manipulation in robotics.

**CPE 555 Control Systems.** (3 Hours) Analysis and design of control systems with emphasis on modeling and dynamic response; transform and time domain methods for linear control systems; stability theory; root locus, bode diagrams and Nyquist plots; design specification in time and frequency domains; state-space design with computer solutions; compensation design in the time and frequency domain; modern design principles.

**CPE 556 Systems Theory.** (3 Hours) Linear operators; impulse response including convolution; transition matrices; fundamental matrix; linear

dynamical system; definition; representation; diagramming principles; signal flow diagramming; analog and digital modeling; controllability and observability; eigenstructure; similarity transformations.

**CPE 557 Robotics.** (3 Hours) Fundamentals of robotics; rigid motions; homogenous transformations; forward and inverse kinematics; velocity kinematics; motion planning; trajectory generation; sensing; vision; and control.

**CPE 560 Embedded Design with Microprocessors.** (3 Hours) Microcomputer system design and use of microprocessors and single chip microcomputers as basic system components; basic microcomputer design and the interface between microprocessor and external devices; course examines the software aspects of microcomputers using assembly language and C programming; single chip microcomputers for embedded and power efficient applications; direct memory access, memory design and management, cache memory, fault tolerance issues, parallel processing with emphasis on hardware issues.

**CPE 571 Engineering Foundations of Biomedical Engineering.** (3 Hours) This course is designed for engineering graduate students who come from traditional engineering disciplines and provides a comprehensive survey of the multi-disciplinary field of biomedical engineering. This course is intended to provide a broad perspective of the role that biomedical engineers play and to serve as an engineering foundation for subsequent, more advanced courses in biomedical engineering. Prerequisite: permission of Department

**CPE 573 Biomedical Instrumentation.** (3 Hours) Origins and characteristics of bioelectric signals, recording electrodes, amplifiers, chemical, pressure and flow transducers, noninvasive monitoring techniques, and electrical safety. Prerequisite: CPE 571

**CPE 575 Biomaterials.** (3 Hours) Introductory course in biomaterials. Topics include structure property relationships for synthetic and natural biomaterials, biocompatibility, and uses of materials to replace body parts. Prerequisite: CPE 571

**CPE 601 Code Optimizations.** (3 Hours) Discussion of methods to improve the performance of code generated by compilers; data-flow and dependence analysis, peep-hole optimization, instruction scheduling, and parallelism enhancing transformations; techniques to improve the utilization of registers, instruction level parallelism, and memory hierarchies in modern computer systems.

**CPE 610 Parallel Computing and Programming.** (3 Hours) Introduction to processing in parallel and distributed computing environments; general concepts of parallel machine models, processes, mutual exclusion, process synchronization, message passing, and programming languages for parallel computing and scheduling; design and analysis of parallel algorithms; performance analysis of parallel algorithms; parallel programming environments: P threads for shared memory multiprocessor systems and PVM/MPI for distributed networks computers.

**CPE 611 Computer Arithmetic.** (3 Hours) Theory and application of computer arithmetic, design, and analysis of computer arithmetic units: fast adders, fast multipliers, shifters, dividers, and floating-point arithmetic units.

**CPE 618 High Performance Computing** (3 Hours) The class will study a variety of algorithms, their applications, and tradeoffs between different solutions. There will be discussions on topics such as parallel computer architectures (memory hierarchy, interconnection networks, latency, bandwidth, parallel I/O), and software systems, with the aim of understanding their capabilities, costs and limitations. Students will make use of recent technology through a number of software packages and programming environments appropriate to the topics addressed. High performance computing tools will be used to compare and evaluate the performance of different implementations through a variety of criteria. Students will draw conclusions regarding preferred algorithms, programming paradigms, and programming environments and tools for parallel and distributed computing.

**CPE 630 Design Automation of VLSI Systems.** (3 Hours) Theory and algorithms for design automation, design automation tools in VLSI systems, Advanced VLSI design principles, Verilog and VHDL hardware description languages; timing-driven physical design and synthesis, circuit simulation and validation, formal verification, design for reuse and System on Chip (SOC) design methodology.

**CPE 635 Advanced Circuit Theory.** (3 Hours) CMOS technology; structured digital circuits; VLSI systems; computer-aided design automation tools and theory for design automation; chip design and integration; microelectronic systems architecture; VLSI circuit testing methods; advanced high-speed circuit design and integration.

**CPE 640 Computer Security.** (3 Hours) Comprehensive introduction to field of computer security; security architectures; physical security; communications security; system security; operational security; network and computer risk analysis; invasion and intruder techniques; case studies; in-depth examination of cryptography; biometrics and their application to computer security will be examined.

**CPE 641 Advanced Computer Networks.** (3 Hours) Concepts and fundamental design principles of computer networks and Internet that have contributed to modern network implementations; survey of new trends in networks and Internet/intranet with design of real networks; topics include discussion of fundamental aspects of Internet application layer (HTTP, FTP, DNS), TCP/UDP socket programming, reliable data transfer, congestion control; network layer (IPv4 and IPv6) and routing; link layer and Local Area Networks (LAN); multimedia networking (RTSP, RPT, RSVP, DiffServ); security in computer networks.

**CPE 642 Computer Network Security.** (3 Hours) Principles and concepts in computer network security; introduction to cryptography, confidentiality, authentication, digital signatures, E-mail security, IP

security, Web security, intruders, intruder detection, malicious software, firewalls, biometrics as applied to security, and other network security-related issues.

**CPE 643 Wireless Networks.** (3 Hours) Wireless architectures and networking; examination of both wireless LANs and mobile wireless networks; wireless network protocols; channel and resource allocation; mobile IP; wireless data management; Quality of Service (QoS); performance modeling; related wireless networking topics; examination of various architectures and standards (802.11, 802.15, 802.16), IR, and other related protocols.

**CPE 644 Optical Communication Systems.** (3 Hours) Principles of optical communication systems and fiber optic communication technology; characteristics of optical fibers, laser diodes, and laser modulation; laser and fiber amplifiers; detection; demodulation; dispersion compensation; system typologies.

**CPE 645 Microwave Circuits and Systems.** (3 Hours) Operating principles of devices at microwave and millimeter wave frequencies; sources; detectors; waveguide; cavities; antennas; scattering parameters; impedance matching; system design.

**CPE 646 Global Positioning Systems and Location Services.** (3 Hours) Examination of satellite navigation systems; overview of transition from radio navigation systems to modern satellite-based systems; examination of satellite signal propagation, clock accuracy, and injected errors and their effect on accuracy; application of GPS and location services as related to autonomous mobile vehicles and public safety; examination of alternative location services and their comparison to GPS.

**CPE 647 Mobile Computing Systems.** (3 Hours) Overview of the emerging field of mobile computing; land mobile vs. satellite vs. in-building communications systems; RF vs. IR; cellular telephony; mobility support in cellular teleTelephone networks; Personal Communications Systems/ Personal Communications Networks; wireless local area networks; direct broadcast satellite; low earth orbiting satellites; examination of data management, reliability issues; mobile IP; end-to-end communication; channel and other resource allocation; routing protocols; 2G and 3G standards and protocols such as TDMA, CDMA, GMS, PCS will be discussed.

**CPE 648 Wireless Sensor Networks.** (3 Hours) Survey of the field of wireless communications as related to low-power embedded sensor networks including communications standards and protocols, e.g. 802.11, Bluetooth, 802.15.4/Zigbee; examination of network services including reliable delivery, routing, naming, and security; examination of system architectures, operating systems and language support, distributed algorithms, and applications for wireless sensor networks; target tracking, data collection and analysis, power and resource management; a sensor network is implemented during the course.

**CPE 649 Telecommunications Network Management** (3 Hours) Systematic examination of standards, basic concepts, current practices in telecom system

management; Telecommunications Network Management (TNM) and OSI coverage; coverage of major telecom management standards; examination of management issues relating to both wireless mobile networks and traditional telecom systems; coverage of essential features of TNM architectures; examination of management of telecommunication network equipment and services; interoperability in a multi-supplier environment.

**CPE 655 Advanced Control Systems.** (3 Hours) Linearization of nonlinear systems; phase-plane analysis; Lyapunov stability analysis; adaptive estimation; stability of adaptive control systems.

**CPE 670 Wireless Design Laboratory.** (3 Hours) Laboratory experiments directed towards in-depth understanding of the implementation of components used in wireless communications; practical experience in the use of Bluetooth, WiFi, 802.11, and RF related components and networks.

**CPE 671 3G and 4G Wireless Networks.** (3 Hours) Examination of the technical, business, and regulatory issues surrounding third and fourth generation (3G and 4G) wireless communication systems; examination of the evolution of the various generation of wireless communications; focus on CDMA, Wideband CDMA, 3G, GSM, 4G designs and applications; extensive use of case studies; examination of both protocols and physical implementations.

**CPE 672 Network Quality Assurance and Simulation.** (3 Hours) Focus on the theoretical and practical aspects of network simulation and quality assurance; fundamentals of simulation and statistical modeling; random variable distributions; random number generation; wireless network performance; distributed systems; distributed and parallel systems and services; resolution in simulation; modeling and abstraction in multilevel simulation; distributed simulation consideration; implementation of actual network simulation and modeling project.

**CPE 673 Wireless Internet Applications Development.** (3 Hours) Course focuses on the Wireless Application Protocol (WAP) and the Wireless Markup Language (WML), Microsoft Mobile .Net framework, Java Server Pages, Active Server Pages, CGI, and related protocols; attention is directed to development of applications using both thin and thick client models; course is composed of development of applications using both simulators and actual application servers and wireless devices such as WAP enabled Telephones, PDAs, and personal communication devices.

**CPE 693 Advanced Topics in Engineering.** (Variable 1 to 4 Hours) Graduate standing in engineering. Lectures on advanced topics of special interest to students in various areas of computer engineering are introduced. This course number is used to offer and test new courses.

**CPE 695 Scientific Writing Seminar.** (1 Hour) Exercises in scientific writing format and style, with particular emphasis on writing abstracts and manuscripts for publication in referred archival journals.

**CPE 696 Seminar.** (1 Hour) Presentation of papers, projects and reports by visiting lecturers, graduate students, engineers, and community leaders.

**CPE 697 Internship.** (Variable 1-3 Hours) Supervised graduate internship or externship in selected areas. Prerequisite: permission of Department.

**CPE 698 Independent Study.** (Variable 1-4 Hours) Intensive study of a special engineering project including research and literature review selected in accordance with the student's interests and arranged in consultations with the advisor. Topics will vary. Student will make periodic reports as well as a paper at the end of the semester. Prerequisite: permission of Department.

**CPE 699 Thesis Research.** (Variable 1-6 hrs) Master's thesis representing independent and original research. Prerequisite: permission of advisor.

**CPE 899 Dissertation Research.** (Variable 1-6 Hours) Dissertation representing independent and original research.

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### Doctor of Philosophy COMPUTATIONAL AND DATA-ENABLED SCIENCE AND ENGINEERING (CDS&E)

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**Faculty** (Interdisciplinary, listed by their Specialized Track)

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### COMPUTATIONAL BIOLOGY AND BIOINFORMATICS

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**Faculty**

Dr. C. Howard, Associate Professor  
Dr. H.C. Huang, Assistant Professor  
Dr. R. Kafoury, Associate Professor  
Dr. J. Stevens, Professor  
Dr. T. Taylor, Assistant Professor

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### COMPUTATIONAL SCIENCE AND ENGINEERING

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Dr. Shahrouz Aliabadi, Professor  
Dr. F. C. Dancer, Assistant Professor  
Dr. S. Hong, Assistant Professor  
Dr. J. Jackson, Associate Professor  
Dr. H. Kim, Associate Professor  
Dr. M. Manzoul, Professor  
Dr. N. Meghanathan, Professor  
Dr. L. A. Moore, Professor  
Dr. T. Pei, Professor  
Dr. A. Tanner, Assistant Professor  
Dr. Shuang Tu, Associate Professor

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### **COMPUTATIONAL PHYSICAL SCIENCE**

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Dr. Jiange Zhou, Assistant Professor  
Dr. G. Hill, Associate Professor  
Dr. Md. Hossain, Associate Professor  
Dr. M. Huang, Professor  
Dr. J. Leszczynski, Presidential Distinguished  
Professor  
Dr. I. Ogungbe, Professor  
Dr. P. Ray, Professor  
Dr. J. D. Watts, Professor

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### **COMPUTATIONAL MATHEMATICS AND STATISTICAL SCIENCES**

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Dr. Bassirou Diatta, Associate Professor  
Dr. R. Gentry, Professor  
Dr. Tor A. Kwembe, Professor  
Dr. Celestin Wafo Soh, Professor  
Dr. NingNing Wang, Associate Professor  
Dr. Yonghua Yan, Assistant Professor  
Dr. Zhenbu Zhang, Professor

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### **COMPUTATIONAL PUBLIC HEALTH SCIENCE**

<sup>1</sup>  
[https://obamawhitehouse.archives.gov/blog/2012/03/29/  
big-data-big-deal](https://obamawhitehouse.archives.gov/blog/2012/03/29/big-data-big-deal)

<sup>2</sup>  
[https://obamawhitehouse.archives.gov/blog/2012/03/29/  
big-data-big-deal](https://obamawhitehouse.archives.gov/blog/2012/03/29/big-data-big-deal)

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Dr. Emeka Nwagwu, Professor  
Dr. Issac Perkins, Professor  
Dr. Jung Lee, Assistant Professor  
Dr. Marinelle Payton, Professor  
Dr. Sharma Manjo, Professor  
Dr. Sophia Leggett, Associate Professor  
Dr. B. Graham, Associate Professor  
Dr. R. Kafoury, Associate Professor  
Dr. R. Kulawardhana, Assistant Professor  
Dr. J. Stevens, Associate Professor  
Dr. D. Sutton, Associate Professor  
Dr. P. Tchounwou, Presidential Distinguished  
Professor  
Dr. C. Yedjou, Associate Professor

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### **CDS&E Ph.D. Program – Overview**

The doctoral program in computational and data-enabled science & engineering (CDS&E) is a research-oriented program that requires a minimum of 72 credit hours beyond the Bachelor's degree or a minimum of 48 credit hours beyond the Master's degree. The program shares resources with the departments and schools offering concentrations in CDS&E and operates under the College of Science, Engineering, and Technology (CSET). CDS&E serves as a modeled path to the PhD, long in demand by industry, government and private labs and coming into its own as demanded by the nation's need<sup>1</sup> to create knowledge from the overwhelming world of data thrust upon us in today's global world of sensors and its permeation in all disciplines. The CDS&E program seeks to improve our ability to extract knowledge from large and complex digital data as we meet the national imperative to accelerate discoveries in science and engineering, strengthen our national security and transform teaching and learning<sup>2</sup>. Transdisciplinary, multidisciplinary and interdisciplinary research is at the core of the CDS&E and hence JSU's CDS&E meets the challenges by:

1. Providing core courses that allow transitioning students from all disciplines
2. Integrating and adapting the Affinity Research Group (ARG) Model<sup>3</sup>- a cooperative learning approach involving students with diverse

<sup>3</sup>  
[http://cahsi.cs.utep.edu/cahsifiles/Files/Resources/The  
AffinityResearchGroupModel.pdf](http://cahsi.cs.utep.edu/cahsifiles/Files/Resources/TheAffinityResearchGroupModel.pdf)

backgrounds and emphasizing the conscious development of students' domain knowledge, research abilities, team skills and professional identity [Such as been demonstrated as an effective means of ensuring student engagement<sup>4</sup>]

The educational objectives of the CDS&E Ph.D. program are met by:

- Providing students with advanced theoretical, analytical, and applied interdisciplinary research training of high quality at the Ph.D. level.
- Providing the necessary structures, learning opportunities, and experiences beyond the traditional university curriculum required for diversity and interdisciplinary collaborations in areas of Computational Biology and Bioinformatics, Computational Mathematics and Statistical Sciences, Computational Physical Sciences, Computational Public Health Science, and Computational Science and Engineering.
- Producing high quality graduates with terminal degrees in CDS&E capable of joining the workforce in industry, academia and state or federal agencies and of becoming the future leaders in computing-centric and Big Data fields.

#### Specialized Tracks in CDS&E

The following Specialized Tracks are being offered:

- Computational Biology and Bioinformatics
- Computational Mathematics and Statistical Sciences
- Computational Physical Sciences
- Computational Science and Engineering
- Computational Public Health Science

#### Admission Requirements

To be considered for admission, the following requirements should be met:

1. Applicants must have completed the Graduate Application for Admission.
2. Applicants must have provided official copies of transcripts from all colleges/universities attended.
  - a) The applicant must have a Bachelor's or Master's degree from an accredited college or university in a STEM or Public Health Sciences, and
  - b) A minimum GPA of 3.00 (on a 4.00 scale) on the highest degree earned.
3. A satisfactory TOEFL score for international students whose native language is not English.

4. Three letters of recommendation from three professors or professionals knowledgeable of the applicant's professional academic ability, job experiences, and leadership potential.
5. A statement of purpose.

*The above listed are the minimal requirements, and do not guarantee acceptance into the program.*

#### Degree Requirements

The requirements for the Doctorate of Philosophy Degree in Computational and Data-Enabled Science and Engineering are:

- A minimum of 72 credit hours beyond the Bachelor's Degree

or

- A minimum of 48 credit hours beyond the Master's Degree.

These requirements are distributed as follows:

Common Core = 12 credit hours

Track Requirement = 12 credit hours

Track electives = 24 credit hours

Dissertation = Not more than 24 credit hours

For an applicant with at least a Master's Degree, the course and Dissertation credit hour requirements shall be decided by the Graduate Admissions Committee of the Ph.D. program after evaluating the applicant's transcripts and academic records.

Additional requirements include:

1. Satisfactory performance on the Comprehensive Qualifying Examination (GNST 700); and
2. Satisfactory performance on the Graduate Area Comprehensive Examinations (GNST 888) and Successful defense of the dissertation research. The final basis for granting the degree shall be the candidate's grasp of the subject matter in a specialized track of CDS&E, and a demonstrated ability to express thoughts clearly and forcefully in both written and oral presentations and publications in peer reviewed journals.

#### Comprehensive Qualifying Examination (GNST 700)

In order to ensure that the skills and basic knowledge have been acquired to carry out the research necessary for the dissertation, the student must demonstrate competence in the common core and concentration track areas. Competence will be demonstrated by a comprehensive qualifying examination which shall consist of written examinations over each of these two areas. The two-part comprehensive qualifying examination will consist of 3 of the 4 common core

<sup>4</sup> <https://www.computer.org/web/cspress/arg>

courses (CSC 601, CSC 620 and STAT 661 or STAT 672) as Part I and all of the 4 required courses for the chosen track as Part II. A good performance on both Part I and Part II exams will be required for passing. Knowledge of the content of the courses listed in the common core and specialized concentration tracks, such as the typical course sequence listed under each area, should be adequate preparation for the comprehensive qualifying examination. Study guides for each of the examination areas will also be available.

A Comprehensive qualifying examination will normally be scheduled at the beginning of the spring semester and once during the summer. To show satisfactory progress in his/her graduate studies, a student is normally expected to complete his/her comprehensive qualifying examinations by the end of the second full academic year of Ph.D. work or equivalently, completing the common core and concentration track course work. A student will be allowed to repeat an examination only once or as recommended by the faculty advisory committee.

#### **Graduate Area Comprehensive Examination (GACE)**

When the comprehensive qualifying examinations have been passed, the Graduate Advisory Committee is formed. The Doctoral Committee and mentor are selected with the dissertation research topic chosen, and when all course work on the program of study has been completed, the student may request the Graduate Area Comprehensive Examination (GACE) to be scheduled. The GACE will be an examination in the core courses as well as an in-depth examination in the track. It will be administered by the student's doctoral committee and must contain an oral component. Pass or fail will be determined by the majority vote of the committee. The oral component of the examination is open to members of the faculty.

#### **The Dissertation**

After the GACE has been passed, the student's doctoral committee will be reconstituted to form the dissertation committee. The student and the major professor of the doctoral committee will select the student's dissertation committee, subject to the approval of the CDS&E Ph.D. Advisory Committee. The dissertation committee will consist of at least five graduate faculty members, including a major professor and at least three additional graduate faculty members from the other concentration tracks, including an external member. The primary responsibility of the committee will be to supervise the student's research and writing of the dissertation in the chosen concentration track, and its members should be chosen with this mission in mind.

In the early stages of the research effort, the student will make a formal dissertation proposal to the dissertation committee. The dissertation will be an original work that makes a significant contribution to the student's area of specialization. An external person who has expertise in the dissertation area will be enlisted by the

student and his/her committee to serve as an external examiner for the dissertation. This person will read the dissertation and submit written comments regarding its quality and significance to the student's committee. It is highly recommended that at least two publications in professionally refereed journals be resulted from the dissertation.

#### **Final Defense Examination**

After all other examinations and the dissertation have been completed, the student's committee will schedule the final defense examination for the student. This examination will consist of an oral defense of the dissertation and will be open to the public.

After consultation with the CDS&E Ph.D. program Coordinator, the major professor will publicize the time and place that the examination will be held. This announcement should be at least one week prior to the scheduled date of the examination.

A pass or fail on this examination will be determined by a majority vote of the student's committee. In making its decision, the committee will give due consideration to the external examiner's assessment of the dissertation and the refereed publications that resulted from the dissertation.

#### **Requirements for students who hold a Master's Degree (in Mathematics/ Computer Science/ Engineering) – A minimum of 48 credit hours**

These students will consult with an adviser within their chosen track to develop a degree plan for a minimum of 48 credit hours. The Common Core Course work covering 12 credit hours is required. Students who pass the Admission to the CDS&E Ph.D. Candidacy Exam (The Comprehensive Qualifying Examination) before completing the common core courses can transfer those courses into the developed degree plan.

A student with a Master's degree in a CDS&E discipline can transfer at most 24 credit hours of coursework from their Master's degree transcript to the categories of Common Core, Track Requirements and Track electives (as applicable, decided in consultation with the adviser). This implies, for the PhD degree, a student who already has a Master's degree in a CDS&E discipline should do a minimum of 24 credit hours of additional coursework (to satisfy the overall 12, 12 and 24 credit hour requirements for Common Core, Track Requirements and Track Electives respectively) and at most 24 credit hours of dissertation as well as pass the Comprehensive Qualifying Examination and the Graduate Area Comprehensive Examination.

#### **Progress Towards Earning the CDS&E Ph.D.**

To become a candidate for the Doctor of Philosophy



Degree in CDS&E, the student must have:

1. Completed the formal coursework with a GPA of 3.0 or better.
2. During the first two semesters of study, students are required to attend CDSE 700 –Seminar in CDS&E (focus on ARG and understanding of the profession)
3. Passed a comprehensive qualifying examination. A good performance (or average of 80% scores) on the Common Core and Concentration track exams will be required for passing. The student entering the program with a bachelor’s degree will be required to take the comprehensive qualifying examination, for the first time, no sooner than in their third semester (when the common core and concentration tracks course work has been completed), and within the first 2 years of admission into the program. The student will be required to pass within five (5) semesters of admission, and will have two (2) opportunities for passing.
4. Students who pass the Comprehensive Qualifying examination must immediately meet the **IRB/IACUC** regulations compliance and apply for Graduate Degree Candidacy and form a doctoral advisory committee in consultation with their chosen faculty advisor or mentor and enroll in CDSE 899 (CDS&E Research Seminar-continuation of the ARG model implementation engaging student weekly presentations and their faculty advisors).
5. Complete all the required course work with at least 6 credit hours of internship or research experience at a High-Performance Computing Facility or Laboratory, or as on campus training with IT. Obtain the **IRB approval or exemption**, if applicable.
6. Form a dissertation committee and submit a dissertation proposal.
7. Complete the Graduate Area Comprehensive Examination.
8. Follow the guidelines for preparing a Doctoral Dissertation from the Division of Graduate Studies.
9. Submit preliminary copies of the dissertation to the committee.
10. Schedule the Dissertation Defense.
11. Public announcement of the Dissertation Defense.
12. Submit Committee Report of Dissertation Defense to Graduate Studies. Follow Graduate Studies Deadlines.
13. Submit Final Draft of the dissertation to the Chairperson of the committee and committee members.
14. Final Submission of Corrected (or proofed) Dissertation before final graduation clearance deadline.

15. Removal of “Incomplete” or “In-Progress” Grades.
16. Apply for Online Graduation Clearance. Follow the University Deadlines per the Registrar.
17. Participate in the Commencement Exercises - Optional.

**Transfer of Credits**

A course for which transfer credit is sought must have been completed with a grade of "B" or better. Holders of at least the Master’s degree can transfer up to 24 credit hours. Please refer to the Division of Graduate Studies guidelines.

**Time Limit**

Students with adequate computational sciences and concentration area subject disciplines preparation at the undergraduate level can take at least five years and three years at the master’s level to complete the CDS&E Ph.D. program. However, all students must complete their programs within five years of becoming a candidate for the CDS&E Ph.D. degree.

**Curriculum**

**Requirements for students with a Bachelor’s Degree**

<b>Common Core</b>	<b>12 credit hours</b>
<b>Track Requirements</b>	<b>12 credit hours</b>
<b>Track Electives</b>	<b>24 credit hours</b>
<b>Dissertation</b>	<b>At most 24 credit hours</b>
<b>Total</b>	<b>72 credit hours*</b>

*\*Minimum requirements; additional requirements may be recommended by the Doctoral Committee*

<b>Common Core Courses (12 hrs)</b>		<b>Semester</b>
<b>Course</b>	<b>Title</b>	<b>Hours</b>
CSC 552	Applied Programming	3
CSC 601	Computing Algorithms	3
CSC 620	Database Management Systems	3
STAT 672	Computational Statistics	3
<b>or</b>		
STAT 661	Advanced Probability and Statistics	3

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**Computational Biology and Bioinformatics Track**

Required Courses (12 hrs)		Semester Hours
Course	Title	Hours
CSC 651	Foundations of Programming and Computer Systems	3
BIO 509	Genetics	3
BIO 540	Cell Biology	3
BIO 679	Statistics for Bioinformatics	3

**Elective Courses (24 hrs)**

Elective Courses will be approved by the student's graduate committee. A sample list of elective courses for this track is as follows:

Elective Courses		Semester Hours
Course	Title	Hours
BIO 601	Statistical Genomics	3
BIO 603	Protein Informatics	3
BIO 615	Mathematical Modeling of Biological Systems	3
BIO 619	Computational Proteomics and Genomics	3
BIO 623	Systems Biology and Signaling Networks	3
BIO 635	Cancer Biology	3
BIO 689	Advanced Seminar in Computational Biology	1
BIO 709	Analysis and Visualization of Large Scale Genomic Data Sets	4
BIO 711	Computational Genomics	3
BIO 713	Computational Systems Biology	3
CDSE 700	Seminar in CDS&E	1-3
CDSE 701	Internships in CDS&E	1-3
CDSE 702	Current Trends in CDS&E	1-3
<b>Dissertation (at most 24 hrs)</b>		
CDSE 899	Dissertation Research	1-9

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**Computational Mathematics and Statistical Sciences Track**

Required Courses (12 hrs)		Semester Hours
Course	Title	Hours
MATH 670	Computational Methods in Mathematics I	3
MATH 671	Computational Methods in Mathematics II	3
STAT 661	Advanced Probability and Statistics	3
MATH 673	Quantitative Exploration of Data	3

**Elective Courses (24 hrs)**

Elective Courses will be approved by the student's graduate committee. A sample list of elective courses for this track are as follows:

Electives Courses		Semester Hours
Course	Title	Hours
CSC 511	Parallel and Distributed Computing	3
CSC 812	High Performance Scientific Computing	3
MATH 700	Topics in Mathematical and Statistical Applications in CDS&E	3
MATH 543	Numerical Analysis	3
MATH 571	Advanced Numerical Analysis I	3
MATH 572	Advanced Numerical Analysis II	3
MATH 577	Ordinary Differential Equations I	3
MATH 578	Ordinary Differential Equations II	3
MATH 628	Advanced Partial Differential Equations I	3
MATH 629	Advanced Partial Differential Equations II	3
STAT 680	Computational Data Analysis and Visualization I	3
STAT 681	Computational Data Analysis and Visualization II	3
MATH 561	Probability and Statistics I	3
MATH 562	Probability and Statistics II	3
CDSE 700	Seminar in CDS&E	1-3
CDSE 701	Internship in CDS&E	1-3
CDSE 702	Current Trends in CDS&E	1-3
<b>Dissertation (at most 24 hrs)</b>		
CDSE 899	Dissertation Research	1-9

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**Computational Physical Sciences Track**

Required Courses (12 hrs)		Semester Hours
Course	Title	Hours
CSC 651	Foundations of Programming and Computer Systems	3
CHEM 768	Molecular Quantum Mechanics	3
PHY 522	Quantum Theory	3
PHY 533	Solid State Physics	3
<b>Elective Courses (24 hrs)</b>		
Course	Title	Semester Hours
CHEM 734	Physical Biochemistry	3

CHEM 752	Atomic and Molecular Spectroscopy	3
CHEM 753	Thermodynamics	3
CHEM 754	Kinetics	3
CHEM 758	Quantum Chemistry	3
CHEM 763	Statistical Mechanics	3
CHEM 787	Nanoscience and Nanotechnology	3
PHY 512	Classical Electrodynamics	3
PHY 531	Atomic and Nuclear Physics	3
PHY 561	Computational Methods in Physics	3
PHY 621	Quantum and Nonlinear Optics	3
PHY 640	Relativistic Quantum Field Theory	3
PHY 634	Concepts and Phenomena of Condensed Matter Physics	3
CDSE 700	Seminar in CDS&E	1-3
CDSE 701	Internships in CDS&E	1-3
CDSE 702	Current Trends in CDS&E	1-3
<b>Dissertation Course (at most 24 hrs)</b>		
CDSE 899	Dissertation Research	1-9

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**Computational Science and Engineering Track**

<b>Required Courses (12 hrs)</b>		<b>Semester Hours</b>
<b>Course</b>	<b>Title</b>	
CSC 511	Parallel and Distributed Computing	3
CSC 571	Programming for Big Data	3
CSC 621	Machine Learning	3
CSC 641	Network Science	3

**Elective Courses (24 hrs):** Elective Courses will be approved by student's doctoral committee. A sample list of elective courses for this track are as follows:

<b>Elective Courses</b>		<b>Semester Hours</b>
<b>Course</b>	<b>Title</b>	
CSC 537	Cloud Computing	3
CSC 562	Artificial Neural Networks	3
CSC 573	Modeling and Simulation of Complex Systems	3
CSC 582	Social Network Analysis	3
CSC 630	Computability and Complexity	3
CSC 634	Big Data Mining	3
CSC 635	Big Data for Cyber Security	3
CSC 653	Large-Scale Computing	3

CSC 661	Software Engineering for Computational Applications	3
CSC 663	High Performance Scientific Computing	3
CDSE 700	Seminar in CDS&E	1-3
CDSE 701	Internships in CDS&E	1-3
CDSE 702	Current Trends in CDS&E	1-3
<b>Dissertation (at most 24 hrs)</b>		
CDSE 899	Dissertation Research	1-9

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**Computational Public Health Science Track**

<b>Required Courses (12 hrs)</b>		<b>Semester Hours</b>
<b>Course</b>	<b>Title</b>	
CSC 751	Foundations of Programming and Computer Systems	3
PHS 701	Advanced Biostatistics and Computer Science Applications	3
PHS 707	Public Health Informatics—Under development	3
PHEP 711	Behavioral and Psychosocial Epidemiology	3

**Electives (24 hrs):** Elective Courses will be approved by the student's graduate committee. A sample list of elective courses for this track are as follows:

<b>Elective Courses</b>		<b>Semester Hours</b>
<b>Course</b>	<b>Title</b>	
PHS 505	Principles of Epidemiology	3
PHS 506	Research and Quantitative Methods	3
PHS 531	Health Behavior Promotion and Education	3
PHS 703	Designing Research Studies for Minorities and Special Populations	3
PHS 705	Advocacy and Public Health Policies	3
PHS 706	Principles of Environmental and Occupational Health	3
ENV 702	Environmental Health	3
ENV 720	Environmental and Occupational Health	3
ENV 717	Introduction to Remote Sensing for Environmental Science	3
ENV 718	Application of Remote Sensing in Environmental Science	3
ENV 751	Water Quality Management	3
ENV 755	Air Quality Management	3

ENV 800	Environmental Toxicology	3
ENV 801	Risk Assessment and Management	3
CDSE 700	Seminar in CDS&E	1-3
CDSE 701	Internships in CDS&E	1-3
CDSE 702	Current Trends in CDS&E	1-3
<b>Dissertation (at most 24 hrs)</b>		
CDSE 899	Dissertation Research	1-9

<b>Project</b>	<b>3 Credit hrs</b>	<b>Thesis</b>	<b>6 Credit hrs</b>
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**Core Courses (12 hrs)**

CSC 520 Database Management Systems (3 hrs)  
 CSC 552 Applied Programming (3 hrs)  
 CSC 601 Computing Algorithms (3 hrs)  
 STAT 661 Probability and Statistics (3 hrs) or  
 STAT 672 Computational Statistics

**Required Courses (9 hrs)**

**A student will choose a particular track for the required courses after consultation with the graduate advisor.**

**Track 1: Computational Biology and Bioinformatics**

BIO 605 Mathematical Modeling of Biological Systems  
 BIO 619 Advanced Genetics  
 BIO 679 Statistics for Bioinformatics

**Track 2: Computational Mathematics and Statistical Sciences**

MATH 670 Computational Methods in Mathematics I  
 STAT 672 Computational Statistics  
 MATH 673 Quantitative Exploration of Data

**Track 3: Computational Physical Science**

PHY 522 Quantum Theory  
 PHY 533 Solid State Theory  
 PHY 561 Computational Methods in Physics

**Track 4: Computational Science and Engineering**

CSC 551 Parallel and Distributed Computing or CPE 610 Parallel Computing and Programming  
 CSC 571 Programming for Big Data  
 CSC 621 Machine Learning

**Elective Courses (9-12 hrs)**

Elective Courses will be approved by the student's graduate committee. A list of elective courses is given below (the elective courses can be taken from one or more tracks):

BIO 623 Systems Biology and Signaling Networks  
 BIO 635 Cancer Biology  
 BIO 689 Advanced Topics in Computational Biology  
 MATH 543 Numerical Analysis  
 MATH 628 Advanced Partial Differential Equations I  
 MATH 629 Advanced Partial Differential Equations II  
 MATH 671 Computational Methods in Mathematics II  
 MATH 700 Topics in Mathematical and Statistical Applications in CDS&E  
 STAT 661 Probability and Statistics  
 STAT 680 Computational Data Analysis and Visualization I

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Master of Science  
 COMPUTATIONAL AND DATA-ENABLED  
 SCIENCE AND ENGINEERING (CDS&E)

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M.S. in CDS&E Program – Overview  
 The Master of Science (M.S.) in Computational and Data-Enabled Science & Engineering (CDS&E) program is an interdisciplinary program, which includes the disciplines of Biology, Chemistry, Computer Science, Engineering, Physical Sciences, and Mathematics & Statistical Sciences. Jackson State University already has strong undergraduate and graduate degree programs in these traditional areas. A PhD program in CDS&E started in the Fall of 2014. The M.S. program in Computational and Data-Enabled Science & Engineering requires a minimum of 36 credit hours beyond the Bachelor's degree. The M.S. program in CDS&E serves as a feeder program for the PhD program in CDS&E and will provide a foundation for students to successfully pursue the doctoral program and employment outside of the academy. The program shares resources with the existing STEM programs and operates under the College of Science, Engineering, and Technology (CSET). The M.S. in CDS&E can be completed with a thesis or project.

**Curriculum**

Project Option		Thesis Option	
Core Courses	12 Credit hrs	Core Courses	12 Credit hrs
Required Courses	9 Credit hrs	Required Courses	9 Credit hrs
Elective Courses	12 Credit hrs	Elective Courses	9 Credit hrs

STAT 681 Computational Data Analysis and Visualization II

PHY 512 Classical Electrodynamics  
PHY 634 Concepts and Phenomena of Condensed Matter Physics  
PHY 640 Relativistic Quantum Field Theory  
PHY 531 Atomic & Nuclear Physics  
CHEM 531 Biochemistry  
CHEM 533 Thermodynamics  
CHEM 558 Quantum Chemistry

CSC 511 Object-Oriented Programming  
CSC 534 Data Mining  
CSC 537 Cloud Computing  
CSC 562 Artificial Neural Networks  
CSC 573 Modeling & Simulation of Complex Systems  
CSC 582 Social Network Analysis  
CSC 630 Computability and Complexity  
CSC 634 Big Data Mining  
CSC 635 Big Data for Cyber Security  
CSC 641 Network Science  
CSC 653 Large Scale Computing  
CSC 661 Software Engineering for Computational Applications  
CSC 663 High Performance Scientific Computing  
CPE 505 Analysis of Algorithms  
CPE 547 Modeling and Analysis of Computer and Communication Systems

#### **Project (3 hrs)**

Students can enroll in the project courses from one of these disciplines until further notice:

BIO 600 Special Topics (1-3 hrs)  
CHEM 579 Master's Project (1-3 hrs)  
CSC 595 Information Systems Development Project (1-3 hrs)  
MATH 598 Master's Project (1-3 hrs)  
SCI 587 Independent Study (1-3 hrs)

#### **Thesis (6 hrs)**

Students can enroll in the thesis courses from one of these disciplines until further notice:

BIO 599 Thesis Research (1-6 hrs)  
CHEM 580 Thesis Research (1-6 hrs)  
CSC 599 Thesis Research (1-6 hrs)  
MATH 599 Thesis (1-6 hrs)  
SCI 599 Thesis (1-6 hrs)

#### **Special Requirements:**

To become a candidate for the Master of Science in Computational and Data Enabled Sciences and Engineering, students will have to:

1. Take and pass the Graduate Area Comprehensive Examination (GACE) on the 4 core courses. The eligibility criteria for taking the GACE will be the same as that set by the Graduate School (This

requirement is waived for CDS&E Ph.D. students who have passed the Comprehensive Qualifying Examination). A student will have two chances to pass the GACE exam on the 4 core courses.

2. Additionally the student will need to present and defend his/her Master's Project or Thesis to a committee comprised of the student advisor and committee members.

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## DESCRIPTION OF COURSES

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### **Common Core Courses**

**CSC 552 Applied Programming (3 Hours):** Prerequisite: Department and advisor approval. This course focuses on the fundamentals of computing and is geared toward non-CS majors going into computational sciences. The course will cover key concepts of data structures, data manipulation, algorithms and efficiency, and how they apply to the various application domains specific to computational fields. The course will also provide an introduction to Python for computational sciences. Topics include: an introduction to computational complexity, data structures (arrays, lists, stacks, queues, trees, and graphs), elementary algorithms and their complexity.

**CSC 601 Computing Algorithms (3 Hours):** Prerequisite: CSC 515 Data Structures and Algorithm Analysis or department approval. The course focuses on algorithms of different design strategies, and the mathematical concepts used in describing the complexity of an algorithm. Topics covered include: Asymptotic notations; Time complexity analysis of iterative and recursive algorithms; Classical design strategies like Exhaustive search, Brute force, Divide and Conquer, and Greedy; Advanced design strategies like Dynamic Programming, Branch and Bound, Randomized algorithms; Space-time tradeoffs in algorithms and NP-completeness - Heuristics and Approximation algorithms. The course will also cover graph theory algorithms with respect to the application of the above design strategies for specific problems.

**CSC 620 Database Management Systems (3 Hours):** This course is designed for non-computer science majors entering the Ph.D. in Computational and Data Enabled Sciences and Engineering. It introduces students to the concepts and theories of database systems, necessary in the CDS&E fields. Topics include: information models and systems; the database environment; data modeling; conceptual modeling using the entity-relationship approach and mapping to relational tables; the relational model including the relational data structure, integrity rules, relational algebra and relational calculus; normalization; data definition and data manipulation in SQL; conceptual, logical, and physical database design; security; transaction management; query processing; and advanced topics in database systems, and how this applies to computational and data enabled sciences and engineering.

**STAT 661 Advanced Probability and Statistics (3 Hours):** Prerequisite: Mathematics 532 or approval of department. Basic concepts of probability theory, distribution functions and characteristics functions,

central limit problem, modern statistical inference, analysis, variance, and decision functions.

**CDSE 700 Seminar in CDS&E (variable 1-3 hours):** This course covers trends and challenges in computational and data enabled science and engineering [CDS&E] and occupational outlook. A student seminar forum on contemporary topics and issues in CDS&E designed for survey of CDS&E literature. The student will be required to prepare and present reports and assigned projects.

**CDSE 701 Internships in CDS&E (Variable 1-3 Hours):** This course covers Industrial Internships training in Computational Data-Enabled Science and Engineering (CDS&E) and occupational outlook in a specific concentration track of the CDS&E Ph.D. program. This include summer (or an academic term (s)) of internship or research participation with industry, research laboratories or other academic research centers. The student will be required to prepare and present reports and assigned projects based on the activities of the internships. Prerequisite: CDS&E Ph.D. students.

**CDSE 702 Current Trends in CDS&E (variable 1-3 hours):** This course covers topics in computational and data enabled science and engineering [CDS&E] specific to a certain track of the CDS&E PhD program that are not covered in the regularly listed courses to fit the research interest of the student.

**CDSE 899 Dissertation in CDS&E (variable 1-9 hours):** This is a Dissertation course representing independent and original research in the area of Computational Data-Enabled Science and Engineering (CDS&E) Ph.D. disciplinary program concentration tracks. Prerequisite: Qualifying Exams/Permission of advisor.

### Computational Biology and Bioinformatics Track

#### Required Courses

**CSC 651 Foundations of Programming and Computer Systems (3 Hours):** This course will focus on graduate-level central concepts in modern programming languages, impact on software development, language design trade-offs, and implementation considerations. Functional, imperative, and object-oriented paradigms. Formal semantic methods and program analysis. Modern type systems, higher order functions and closures, exceptions and continuations. Modularity, object-oriented languages, and concurrency. Runtime support for language features, interoperability, and security issues. Prerequisite: experience in any object-oriented language.

**BIO 509 Genetics (3 Hours):** This course discusses the principles of genetics with application to the study of biological function at the level of cells and multicellular organisms, including humans. The topics include: structure and function of genes, chromosomes and genomes, biological variation resulting from recombination, mutation, and selection, population genetics, use of genetic methods to analyze protein function, gene regulation and inherited disease.

**BIO 540 Cell Biology (3 Hours):** The course will provide an in-depth knowledge regarding the chemistry of the cell, the macromolecules of the cell, bioenergetics that regulate the flow of energy in the cell and the enzymes that catalyze the biochemical processes in the cell. The cell function and its regulation will be emphasized in this course through elaborate discussions of signal transduction mechanisms and gene expression and the pathways that regulate gene expression, including messengers and receptors, extracellular structures and cell adhesion molecules, DNA replication, protein synthesis and sorting. New developments in gene expression biotechnology and recombinant DNA, in addition to proteomics will be discussed.

**BIO 679 Statistics for Bioinformatics (3 Hours):** This course aims to introduce concepts of bioinformatics such as DNA pattern finding, gene expression data analysis, molecular evolution models, and bio-molecular sequence database searching. Introduction of the necessary probability and statistics: events, (conditional) probability, random variables, estimation, testing, and linear and multiple regression analyses are covered in this course.

#### Elective Courses

**BIO 601 Statistical Genomics (3 Hours):** A course in algorithms and knowledge of at least one computing language (e.g., R, MatLab) is recommended. Statistical Genomics is one of the fundamental areas of research in the biological sciences and is rapidly becoming one of the most important application areas in statistics. This course provides an introduction to statistical and computational methods for the analysis of meiosis, population genetics, and genetic mapping. Applications focus on sequence analysis, and high-throughput microarray and sequencing gene expression.

**BIO 603 Protein Informatics (3 Hours):** This course will introduce students to the fundamentals of molecular biology, and to the bioinformatics tools and databases used for the prediction of protein function and structure. It is designed to establish a theoretical understanding of computational methods, as well as experience with protein sequence analysis methods and application to real data.

**BIO 607 Physical Biology (3 Hours):** The course provides theory and application of cascade models predicting the behavior of the individual molecules participating in a cascade and the kinetics of the biochemical reactions that may govern cascades of cellular and molecular transduction of signaling networks. Chemical reaction cycles, including temporal and structural dynamics of the signaling cascade needs are evaluated. Validation of the theoretical insights in a specific biological signal transduction model that incorporates the realistic molecules and biochemical reactions will be discussed and applied.

**BIO 613 Computational Systems Biology and Epigenetics (3 Hours):** In systems biology, epigenetic switches have received increased attention. Multiple phenotypes are usually represented as multiple stable attractors in deterministic descriptions of the

biochemical dynamics from the response of lac operon to the synthetic genetic networks. Theory and application of mathematical analysis in epigenetics will be discussed to understand the multiple phenotypes usually represented as multiple stable attractors in deterministic descriptions of the biochemical dynamics. The system biology model provides a mechanism of positive or negative feedback in modulating the epigenetic switches. In this course, mathematical models of stepwise heterochromatin silencing will be introduced and discussed. Epigenetic states can be explained as a consequence of the existence of two stable uniform static solutions: the hyper-acetylated state and silenced states on DNA.

**BIO 615 Mathematical Modeling of Biological Systems** (3 Hours): Mathematical and computational models are increasingly used to help interpret biomedical data produced by high-throughput genomics and proteomics projects. The application of advanced computer models enabling the simulation of complex biological processes generates hypotheses and suggests experiments. Appropriately interfaced with biomedical databases, models are necessary for rapid access to, and sharing of knowledge through data mining and knowledge discovery approaches.

**BIO 619 Advanced Genetics** (3 Hours): The course focuses on casting contemporary problems in systems biology and functional genomics in computational terms and providing appropriate tools and methods to solve them. Topics include genome structure and function, transcriptional regulation, and stem cell biology, measurement technologies such as microarrays (expression, protein-DNA interactions, and chromatin structure), statistical data analysis, predictive and causal inference, and experiment design. The emphasis is on coupling biological structures with appropriate computational approaches.

**BIO 623 Systems Biology and Signaling Networks** (3 Hours): This course will focus on the application of the principles of systems biology and signaling network biology and how information flow approaches can be applied to solve various biological problems, including uncovering causal genes and pathways, identifying disease genes, predicting gene functions, and network centrality.

**BIO 635 Cancer Biology** (3 Hours): Understanding the molecular and cellular events involved in tumor formation, progression, and metastasis is crucial to the development of innovative therapy for cancer patients. Insights into these processes have been advanced through basic research using biochemical, molecular, and genetic analysis. This course will explore the laboratory tools and techniques used to perform cancer research, major discoveries in cancer biology, and the translational implications of these breakthroughs. A focus of the class will be critical analysis of the primary literature to foster understanding of the strengths and limitations of various approaches to cancer research. Special attention will be made to the clinical implications of cancer research performed in model organisms.

**BIO 689 Advanced Topics in Computational Biology** (1 Hour): Papers covered are selected to illustrate important problems and approaches in the field of computational and systems biology, and provide students a framework from which to evaluate new developments. Computational and Systems Biology links biology, engineering, and computer science in a multidisciplinary approach to the systematic analysis and modeling of complex biological phenomena. This course is one of a series of core subjects offered for students with an interest in interdisciplinary training and research in the area of computational and systems biology.

**BIO 709 Analysis & Visualization of Large Scale Genomic Data Sets** (4 Hours): The goal of this course is to introduce students to computational issues involved in analysis and display of large-scale biological data sets. Techniques covered will include clustering and machine learning techniques for gene expression microarrays and proteomics data analysis, biological networks and pathways modeling, data integration in genomics, and visualization issues for large-scale data sets. An introduction to the field of bioinformatics and the nature of biological data will be provided. In depth knowledge of computer science is not required, but students must have some understanding of computation. The course will be taught in a mixed lectures and seminar format, and will involve completing a project and a final exam.

**BIO 711 Computational Genomics** (3 Hours): This course introduces the mathematical modeling techniques needed to address key questions in modern biology. An overview of modeling techniques in molecular biology and genetics, cell biology and developmental biology is covered. Key experiments that validate mathematical models are also discussed, as well as molecular, cellular, and developmental systems biology, control theory and genetic networks, and gradient sensing systems. Additional specific topics include: constructing and modeling of genetic networks, synthetic genetic switches, circadian rhythms, reaction diffusion equations, local activation and global inhibition models, center finding networks, general pattern formation models, and modeling cell-cell communication.

#### **Dissertation Course**

**BIO 899 Dissertation Research** (Variable 1-9 Hours): Dissertation representing independent and original research in the area of Computational Biology. Prerequisite: permission of advisor.

#### **Computational Mathematics and Statistical Sciences Track**

#### **Required Courses**

**MATH 670 Computational Methods in Mathematics I** (3 Hours): This course is designed to give an overview of the design, analysis and implementation of the most fundamental numerical techniques in numerical linear algebra, the interpolation of functions, and the evaluation of integrals. This course in most part will depend on programming with

MATLAB and/ or C++. While we present many MATLAB examples throughout the course, students are strongly advised to have some previous programming experience in any computer programming language.

**MATH 671 Computational Methods in Mathematics II** (3 Hours): This course is a continuation of MATH 770. Topics covered includes introduction to mathematical and computational problems arising in the context of molecular biology. Theory and applications of combinatorics, probability, statistics, geometry, and topology to problems ranging from sequence determination to structure analysis. The course depends on parallel and distributed programming.

**STAT 661 Advanced Probability and Statistics** (3 Hours): Prerequisite: Mathematics 532 or approval of department. Basic concepts of probability theory, distribution functions and characteristics functions, central limit problem, modern statistical inference, analysis, variance, and decision functions.

**STAT 672 Computational Statistics** (3 Hours): Prerequisite: Departmental approval. This course teaches students to use R, SAS, SPSS and write programs for basic data analysis, simple and multiple regressions, factor analysis, principal component analysis, model selection, variance analysis as well as modeling data and implementations of simulation through random number generating, Monte Carlo method and bootstrapping.

**MATH 673 Quantitative Exploration of Data** (3 Hours): This course covers how to analyze and mine data with the Structured Query Language (SQL). Understand SQL fundamentals, and then advance into the uses of SQL data analysis and data mining with real applications. Learn to use Microsoft Excel to further analyze, manipulate and present your data exploration and data-mining findings in tabular and graphical formats. Students will be exposed to Extreme Science and Engineering Discovery Environment (XSEDE).

#### Elective Courses

**CSC 511/CSC 611 Parallel and Distributed Computing** (3 Hours): Prerequisite: CSC 512 Computer Architecture or approval of Department. The course introduces the concepts and design of parallel and distributed computing systems. Topics covered include: Data versus control parallelism (SIMD/Vector, Pipelines, MIMD, Multi-core, GPU); Shared versus distributed memory (SMP and NUMA), Message passing Interface (MPI) and Topologies; Parallel and distributed algorithms: Paradigms, Models and Complexity, Scheduling, Synchronization, Deadlock detection, Fault tolerance and Load balancing.

**MATH 543 Numerical Analysis** (3 Hours): This course covers elements of error analysis, real roots of an equation, polynomial approximation by finite difference and least square methods, interpolation, quadrature, numerical solution of ordinary differential equations, and numerical solutions of systems of linear equations. Students are expected to use MATLAB and

other program languages to solve problems numerically.

**MATH 561-562 Probability and Statistics I-II** (3-3 Hours): Prerequisite: Mathematics 532 or approval of department. Basic concepts of measure theory and integration axiomatic foundations of probability theory, distribution functions and characteristics functions, central limit problem, modern statistical inference, analysis, variance, decision functions.

**MATH 571 Advanced Numerical Analysis I** (3 Hours): This course is an introduction to parallel computer programming for numerical calculations, round-off error, approximation and interpolation, numerical quadrature, and solution of ordinary differential equations.

**MATH 572 Numerical Analysis II** (3 Hours): This course is a continuation of MATH 625. Topics covered include, iterative solution of systems of nonlinear equations, evaluation of eigenvalues and eigenvectors of matrices, applications to simple partial differential equations and quantitative exploration of data.

**MATH 577-578 Ordinary Differential Equation I--II** (3-3 Hours): Ordinary differential equations: basic theorems of existence, uniqueness, and continuous dependence of the solutions; linear differential equations and systems; stability theory; topology of integral curves; differential equations in the complex domain, asymptotic integration; boundary value problems. Partial differential equations; equations of first order method of characteristics, Hamilton-Jacobi theory; equations of second order-classification according to type; elliptic equations-potential equation, maximum principle, characteristics, and other topics of interest.

**MATH 628 Advanced Partial Differential Equations I** (3 Hours): The theory of initial value and boundary value problems for hyperbolic, parabolic, and elliptic partial differential equations, with emphasis on nonlinear equations. Laplace's equation, heat equation, wave equation, nonlinear first-order equations, conservation laws, Hamilton-Jacobi equations, Fourier transform, Sobolev and other spaces, etc.

**MATH 629 Advanced Partial Differential Equations II** (3 Hours): The theory of boundary value and initial value problems for partial differential equations, with emphasis on nonlinear equations. Second-order elliptic equations, parabolic and hyperbolic equations, calculus of variations methods, additional topics selected by instructor.

**CSC 663 High Performance Scientific Computing** (3 Hours): The course will focus on design of high performance parallel programs for scientific computing. Topics covered include: Single-processor performance, memory hierarchy and pipelines; parallel system organization; message passing and MPI programming; Problem decomposition, graph partitioning, load balancing, Shared memory, CUDA, GPU and Open MP programming.

**STAT 680 Computational Data Analysis and Visualization I** (3 Hours): This course is about learning the fundamental computing skills necessary for effective data analysis.



**STAT 681 Computational Data Analysis and Visualization II** (3 Hours): This course covers exploratory and objective data analysis methods applied to the physical, engineering, and biological sciences.

**MATH 700 Mathematical and Statistical applications** (3 Hours): The course may be repeated for credit. It covers current trends and challenges of mathematical and statistical applications in CDS&E.

**MATH 827 Numerical Solution of Differential Equations** (3 Hours): Ordinary differential equations: Runge-Kutta and predictor-corrector methods; stability theory, Richardson extrapolation, stiff equations, boundary value problems. Partial differential equations: stability, accuracy and convergence, Von Neumann and CFL conditions, finite difference solutions of hyperbolic and parabolic equations. Finite differences and finite element solution of elliptic equations.

#### **Dissertation Course**

**MATH 899 Dissertation Research** (Variable 1-9 Hours): Dissertation representing independent and original research in the area of Computational Mathematics and Statistical Sciences. Prerequisite: permission of advisor.

### **Computational Physical Sciences Track**

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#### **Required Courses**

**CSC 651 Foundations of Programming and Computer Systems** (3 Hours): This course is designed to give students breadth-wise knowledge and foundation in critical aspects of programming and computer systems. The programming concepts to be covered include those for procedural and object-oriented programming using appropriate high-level languages. The computer systems concepts will be covered with regards to Computer Architecture, Operating Systems and Networking. In addition, the course will introduce a broad range of problem-solving skills that can aid scientists to develop software for their field of interest.

**CHEM 768 Molecular Quantum Mechanics** (3 Hours): Theoretical, algorithmic, and practical aspects of the methods of molecular quantum mechanics and their applications to chemical systems. Topics covered include Hartree-Fock theory, perturbation theory, configuration interaction, coupled-cluster theory, and density-functional theory.

**PHY 522 Quantum Theory** (3 Hours): This course covers basic concepts and methods of quantum theory. Topics include mathematical apparatus of quantum mechanics, basic concepts of quantum mechanics, Schrodinger equation, reflection and transmission of plane waves for various potential steps and dips, harmonic oscillator in quantum mechanics, quantum theory of one-electron atom, perturbation theory, scattering theory.

**PHY 533 Solid State Physics** (3 Hours): This course covers basic concepts and methods of solid state theory. Topics include crystal structure and symmetry, diffraction of x-rays by crystals, acoustic and optical

phonons, electron motion in a periodic potential, energy bands, nearly free electron model and tight-binding model, classification of solid states, introduction to phase transitions and collective phenomena.

#### **Elective Courses**

**CHEM 734 Physical Biochemistry** (3 Hours): Characterization of macromolecules, hydrodynamic methods, multiple equilibria, macromolecule-ligand interactions.

**CHEM 752 Atomic and Molecular Spectroscopy** (3 Hours): A comprehensive course covering concepts and methods of modern atomic and molecular spectroscopy. Subjects covered include electric phenomena, absorption and emission of radiation, atomic spectroscopy, rotational spectroscopy, vibrational spectroscopy, electronic spectroscopy, and magnetic resonance spectroscopy.

**CHEM 753 Thermodynamics** (3 Hours): Laws of thermodynamics and their chemical applications. Introduction to chemical kinetics and statistical mechanics.

**CHEM 754 Kinetics** (3 Hours): Mechanics of chemical reactions, cross sections, and rate constants. Elastic, inelastic, and rearrangement channels using quantum and semi-classical techniques.

**CHEM 758 Quantum Chemistry** (3 Hours): Important concepts of quantum chemistry at the intermediate level, including angular momentum, perturbation theory, electronic structure of molecules, and radiation matter interaction. Applications will vary from year to year.

**CHEM 763 Statistical Mechanics** (3 Hours): A study of statistical mechanical ensembles, partition functions and their relationship to thermodynamics, lattice statistics, molecular distribution and correlation functions, the theories of liquids and solutions, phase transitions, and cluster theory.

**CHEM 787 Nanoscience and Nanotechnology** (3 Hours): A comprehensive course provides an overview to the rapidly developing field of nanoscience and nanotechnology with special emphasis on general and material chemistry, environmental science, biotechnology and modeling. The topics include properties of individual nanoparticles, bulk nanostructures, carbon nanotubes, quantum wells, wires and dots; the tools and methods for measuring these properties; methods for growing and synthesizing nanomaterials; applications in biological materials and the fabrication of nanomachines and devices.

**PHY 512 Classical Electrodynamics** (3 Hours): This course covers main concepts and methods of classical electrodynamics. Topics include electrostatics, magneto-statics, electric and magnetic fields in matter, Maxwell's equations, potentials and fields for moving charges, electromagnetic waves, and special relativity.

**PHY 531 Atomic and Nuclear Physics** (3 Hours): Prerequisite: PHY 422 or approval of department. This course covers (atomic physics) the structure of hydrogen atom, alkali atoms, the excitation of atoms, electric dipole selection rules, atoms in magnetic field, normal Zeeman effect, coupling of orbital and spin

angular moments, general Pauli principle and electron anti-symmetry, hyper-fine-structure, (nuclear physics) properties of nuclei (Rutherford scattering, size, mass and binding energy), nuclear forces, nuclear shell model, nuclear collective model, alpha and beta decay, and fusion and fission.

**PHY 561 Computational Methods in Physics** (3 Hours): In this course, students will study how to: get approximate solutions of linear and certain nonlinear equations with some numerical algorithms in physics, such as large angular motion of a pendulum; formulate numerical algorithms for the solution of common second order linear partial differential equations in physics, such as Laplace equation, Poisson equation, Fourier equation of heat flow; and write computer programs to implement the formulated numerical algorithms and output the calculated values of selected physical quantities.

**PHY 621 Quantum and Nonlinear Optics** (3 Hours): Prerequisites: PHY 512, PHY 522 or permission of the department. Introduction to main concepts and methods of nonlinear optics. Topics include anharmonic classical electron oscillator, nonlinear optical tensors and their symmetry properties, macroscopic time-domain response, electrodynamics of nonlinear optics, higher-order nonlinear response, nonlinear phenomena in optical fibers.

**PHY 634 Concepts and Phenomena of Condensed Matter Physics** (3 Hours): This course covers basic concepts and methods of condensed matter physics. Topics include elementary excitations in condensed matter, electrons in metals, phonons and electron-phonon interactions, density-functional theory, superconductivity, and mesoscopic systems.

**PHY 640 Relativistic Quantum Field Theory** (3 Hours): This course covers quantization of scalar, vector and fermion fields, Yukawa theory, QED, regularization and renormalization, the renormalization group, fermion path integrals, non-abelian gauge theory, symmetry breaking and some aspects of the Standard Model. Computer computation of Feynman amplitudes and other big data computational packages will be also discussed.

#### Dissertation Course

**PHY 899/CHEM 899 Dissertation Research** (Variable 1-9 Hours): Dissertation representing independent and original research in the area of Computational Physical Sciences. Prerequisite: permission of advisor.

### Computational Science and Engineering Track

#### Required Courses

**CSC 551 Parallel and Distributed Computing** (3 Hours): Prerequisite: CSC 512 Computer Architecture or approval of Department. The course introduces the concepts and design of parallel and distributed computing systems. Topics covered include: Data versus control parallelism (SIMD/Vector, Pipelines, MIMD, Multi-core, GPU); Shared versus distributed memory (SMP and NUMA), Message passing Interface

(MPI) and Topologies; Parallel and distributed algorithms: Paradigms, Models and Complexity, Scheduling, Synchronization, Deadlock detection, Fault tolerance and Load balancing.

**CSC 571 Programming for Big Data** (3 Hours): The course will expose students to three programming paradigms for big data analytics to cover the three Vs: Velocity, Volume, and Variety. The course will focus on design and development of programs based on the: (1) Supervised and unsupervised machine learning algorithms to perform predictive analytics of Big Data and implement them using a high-level interpreted language such as Octave; (2) Map-reduce parallel programming paradigm for selected data-intensive computational problems; (3) Functional programming paradigm using languages such as OCaml to analyze big data in a recursive fashion. In addition, the course will enable students to be able to configure a distributed file system based on the Hadoop architecture for reliable shared storage and develop programs that interface with it, as well as manage large datasets using SQL-like access to unstructured data (Hive) and NoSQL storage solutions (HBase).

**CSC 621 Machine Learning** (3 Hours): Pre-requisite: CSC 601 Computing Algorithms or CSC 515 Data Structures and Algorithm Analysis or CSC 323 Algorithm Design and Analysis. This course will deal enable students to understand the underlying algorithms used in various learning systems. Topics covered include: Inductive classification, Decision-tree learning, Ensembles, Experimental evaluation, Computational learning theory, Rule learning, Neural network learning, Support vector machines, Bayesian learning, Instance-based learning and Text categorization.

**CSC 641 Network Science** (3 Hours): Pre-requisite: CSC 601 Computing Algorithms or CSC 515 Data Structures and Algorithm Analysis or CSC 323 Algorithm Design and Analysis. Topics covered include the measurement and structure of networks, methods for analyzing network data, including methods developed in physics, statistics, and sociology, graph theory, computer algorithms, mathematical models of networks, including random graph models and generative models, and theories of dynamical processes taking place on networks.

#### Elective Courses

**CSC 537 Cloud Computing** (3 Hours): The course will present the state of the art in cloud computing technologies and applications as well as providing hands-on project opportunities and experiment with different technologies. Topics will include: telecommunications needs; architectural models for cloud computing; cloud computing platforms and services; security, privacy, and trust management; resource allocation and quality of service; cloud economics and business models; pricing and risk management; interoperability and internetworking; legal issues; and novel applications.

**CSC 562 Artificial Neural Networks** (3 Hours): This course will focus on graduate-level topics in artificial

neural networks, including: Rosenblatt's perceptron, model building through regression, the least-mean-square algorithm, multilayer perceptrons, kernel methods and radial-basis function networks, support vector machines, regularization theory, principal-components analysis, self-organizing maps, information-theoretic learning models, stochastic methods rooted in statistical mechanics, neurodynamics, and dynamically driven recurrent networks.

**CSC 573 Modeling and Simulation of Complex Systems** (3 Hours): The course focuses on the application of modeling and simulation principles to large-scale non-linear complex systems with interconnected parts (like a biological cell, economy or an ecological system). Topics covered include: non-linear differential equations, networks, stochastic models, cellular automata, agent-based modeling and swarm-like systems.

**CSC 582 Social Network Analysis** (3 Hours): This course will cover the structure and analysis of large social networks on models and algorithms that abstract their properties. Topics covered include: Nodes, edges, and network measures, structure, and visualization and tools, the tie strength of networks, trust in social media, analyzing and classifying user roles, attributes and behavior, link prediction and entity resolution, epidemic models, location-based social media analysis, social sharing and filtering, aggregation and data mining, and network strategies for the individual and for the government.

**CSC 630 Computability and Complexity** (3 Hours): This course will cover advanced topics in computability and complexity theory. Computability topics covered include: Church-Turing Thesis, Decidability, Reducibility, Recursion Theorem and Decidability of logical theories. Complexity topics covered include: Time Complexity (P, NP, NP-Completeness), Space Complexity (Savitch's theorem, PSPACE, NL-Completeness), Intractability, Probabilistic algorithms and Alternation.

**CSC 634 Big Data Mining** (3 Hours): Pre-requisite: CSC 621 Machine Learning or department approval. This course will focus on data mining of very large amounts of data that is so large enough not to fit in main memory, characteristic of data retrieved from the web. Topics to be covered include: Distributed file systems and Map Reduce, Similarity search techniques, Real-time data-stream processing algorithms, Technology of search engines (PageRank, Link-spam detection, hubs-and-authorities approach) and Frequent-item set mining. The course will also expose students to algorithms for clustering very large, high-dimensional datasets.

**CSC 635 Big Data for Cyber Security** (3 Hours): Pre-requisite: CSC 621 Machine Learning or department approval. This course will focus on data-driven approaches to detect threats and attacks that originate from diverse channels at a rapid rate, necessitating the need for scalable distributed monitoring and cross-relation with a substantial amount of contextual

information. The course will cover various anomaly-based Big Data analytics solutions for Cyber Security.

**CSC 653 Large-Scale Computing** (3 Hours): Prerequisite: CSC 551 Parallel and Distributed Computing. The course will focus on large-scale modeling techniques, algorithms and computational techniques for Big Data computing. Large-scale modeling techniques covered will include linear models, graphical models, matrix and tensor factorizations, clustering, and latent factor models. Algorithmic topics include sketching, fast n-body problems, random projections and hashing, large-scale online learning, and parallel learning. The computational techniques covered in this course will provide a basic foundation in large-scale programming, ranging from the basic "parfor" to parallel abstractions, such as MapReduce (Hadoop) and GraphLab.

**CSC 661 Software Engineering for Computational Applications** (3 Hours): This course focuses on computational software engineering for engineering and scientific applications. Topics include Characteristics of computational software, Development and maintenance activities, Requirement engineering for computational software, Problem analysis and solution design tools, Component reuse, Software reliability, and Computational software validation and verification.

**CSC 663 High Performance Scientific Computing** (3 Hours): The course will focus on design of high performance parallel programs for scientific computing. Topics covered include: Single-processor performance, memory hierarchy and pipelines; parallel system organization; message passing and MPI programming; Problem decomposition, graph partitioning, load balancing, Shared memory, CUDA, GPU and OpenMP programming.

#### **Dissertation Course**

**CSC 899 Dissertation Research** (Variable 1-9 Hours): Dissertation representing independent and original research in the area of Computational Science and Engineering. Prerequisite: permission of advisor.

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## CATALOG INDEX

### A

Academic Common Market .....	33
Academic Regulations .....	15
Advising.....	18
Changing Programs.....	12
Concurrent Degrees .....	17
Concurrent External Credit.....	17
Continuous Enrollment .....	18
Course Loads .....	17
Dismissal .....	16
Good Standing .....	15
Grievance Policy.....	16
Leaves of Absence.....	18
Incompletes.....	17
IRB and IUCAC Approval of Research.....	19
Probation.....	15
Reinstatement .....	16
Repeating Courses .....	17
Residency.....	17
Academic Honesty.....	17
Time Limits .....	17
Transfer of Credit.....	11
Unsatisfactory Work .....	16
Withdrawal from the University .....	18
Accounting, Department of.....	35
Accounting, Master of Professional	
Admission Requirements .....	36
Program Requirements.....	37
Administrative Officers .....	248
Alcohol and Drug Studies Center .....	29
Accreditations .....	7
Address, Change of.....	23
Admissions .....	9
Doctoral Degree, General .....	11
International.....	11
Master's Degree, General .....	9
Non-Degree Seeking.....	10
Specialist Degree, General.....	10
Alternate Route (Teaching).....	75
Assessment .....	33

### B

Behavioral and Environmental Health,	
Department of .....	136
Biology, Department of .....	179
Master of Science in Biology.....	180
Board of Trustees.....	252
Bookstore.....	30
Business Administration	
Doctoral Admissions.....	42
Doctoral Program Requirements.....	42
Master's Admissions.....	36
Master's Program Requirements .....	37
Business, College of .....	35

### C

Campus Police .....	32
Candidacy Requirements	
Admission to Doctoral Candidacy .....	21
Admission to Master's Candidacy.....	19
Admission to Specialist Candidacy.....	20
Center, Small Business Development.....	29
Center for Teacher Quality .....	53

Change of Name and Address .....	23
Chemistry, Physics, Atmospheric, Department of.....	190
Civil and Environmental Engineering,	
Department of.....	197
Clinical Psychology, Doctoral Program	
Admission Requirements .....	124
Degree Requirements .....	125
Communications, School of .....	99
Communicative Disorders, Department of.....	130
Computer Engineering .....	201
Computer Science .....	201
Continuous Enrollment .....	18
Counseling, Rehabilitation and Psychometric.....	
Services, Department of .....	53
Rehabilitation Counseling .....	55
School Counseling.....	53
Specialist Program.....	54

### Criminal Justice and Sociology

Department of.....	113
--------------------	-----

### D

Disability Services.....	23
Diversity Scholarships.....	12
Doctoral Requirements, General	
Admissions.....	11
Candidacy.....	21
Graduation.....	22
Drug Free Schools/Campus.....	23

### E

Early Childhood Education	
Doctoral Degree Program.....	86
Master's Degree Program.....	84
Education and Human Development, College of .....	51
Educational Leadership, Department of .....	59
Urban Higher Education, Department of.....	90
Educational Administration Doctoral Degree.....	65
Educational Administration and Supervision,	
Master's Degree Program.....	56
Specialist Degree Program .....	57
Elementary and Early Childhood Education,	
Department of.....	79
Elementary Education	
Master's Degree Program .....	60
Specialist Degree Program .....	62
English, Foreign Languages, Speech Communication	
Department of.....	99
Master's Degree Program .....	100
Proficiency Advancement Program.....	102
Secondary Education, Foreign Lang.....	101
English Competency Requirements, Master's	
English 500 .....	19
Graduate English Competency Exam .....	19
Enrollment of Seniors in Graduate Courses. ....	18
Environmental Health, Center for .....	30
Environmental Science, Programs	
Doctoral Program-Admission.....	185
Doctoral Program Requirements .....	186
Epidemiology and Biostatistics,	
Department of.....	136
ESL Institute .....	27
Examinations, Master's	
Final Oral Examination .....	20
Graduate Area Comprehensive.....	19
Graduate English Competency .....	19

Special Departmental .....	20
Executive Doctoral Program in Urban Higher Education .....	90
<b>F</b>	
Fine and Performing Arts, School of .....	107
Foreign Languages Program .....	101
<b>G</b>	
General Statements .....	22
Matriculation Forms .....	22
Specific Degree Requirements .....	22
Grading System .....	16
Graduate Council .....	8, 253
Listing .....	251
Graduate Engineering Program .....	212
Graduate Faculty .....	8, 254
Listing .....	252
Graduate Studies .....	8
Graduate Student Support .....	12
Diversity Scholarships .....	12
Graduate Assistantships .....	12
Graduate Tuition Waivers .....	12
Graduate Work Study .....	13
Graduation Requirements, General	
Doctoral Degree .....	21
Master's Degree .....	19
Specialist Degree .....	20
Grievance Policy .....	16
<b>H</b>	
Hazardous Materials, Master's Degree Program .....	197
Health, Physical Education and Recreation, Department of .....	94
Sport Science Program .....	95
Health Policy and Management, Department of .....	136
Health Services .....	32
History, Department of .....	118
History of the University 5	
Housing, Student .....	32
<b>I</b>	
Identification Cards .....	23
Inactive Student Status .....	11
Information Technology .....	27
Interdisciplinary Alcohol/Drug Studies Center Program .....	29
International Students Admission .....	11
Advisor .....	12
IRB and IACUC Approval of Research .....	19
Institutional Biosafety Committee (IBC) .....	19
<b>J</b>	
Jackson Heart Study .....	29
JSU Global .....	26
<b>L</b>	
Leave of Absence .....	18
Liberal Arts, College of .....	98
Linguistics, Master of Arts in English .....	99
<b>M</b>	
Margaret Walker Center .....	29
Mass Communications, Department of .....	104

Master of Arts in Teaching, Alternate Route Elementary Education .....	76
Secondary Education .....	76
Master of Business Administration (MBA) .....	37
Master of Public Health Program .....	136
Master of Public Policy and Administration Degree (MPPA) .....	150
Mathematics, Department of .....	206
Matriculation Forms .....	22
Memberships .....	7
Mississippi Urban Research Center .....	28
Music, Department of .....	107
<b>N</b>	
Name, Change of .....	23
Non-Degree Seeking Students	
Master's-level .....	10
Specialist level .....	10
<b>O</b>	
ORAU .....	33
<b>P and Q</b>	
Political Science, Department of .....	122
Policy and Planning, School of .....	149
Post Office .....	30
Privacy of Student Records (FERPA) .....	22
Probation .....	15
Professional Accountancy, Master's	
Admission Requirements .....	37
Degree Requirements .....	37
Program Options, Master's	
Additional Coursework .....	20
Project .....	20
Thesis .....	20
Psychology, Department of .....	124
Public Administration, Doctoral Program	
Admission Requirements .....	152
Degree Requirements .....	153
Public Health	
Doctoral Program .....	143
Master's Program .....	136
Public Policy and Administration, Department of .....	149
Doctoral Degree Program .....	152
Master's Degree Program .....	150
Public Safety .....	32
Public Service, College of .....	149
<b>R</b>	
Reading .....	84
Readmission .....	11
Rehabilitation Counseling .....	55
Research and Economic Development .....	28
Residency Requirements (State) .....	24
Residence, Degree Programs .....	17
Richard Wright Center .....	29
<b>S</b>	
School of Public Health .....	130
School of Policy and Planning .....	146
School of Social Work .....	162
Secondary Education	
Alternate Route .....	76
Master Degree Program .....	76

Foreign Languages.....	102
Specialist Degree .....	77
Services for Students and Employees	
with Disabilities .....	23
Sexual Harassment, Policy Statement on .....	24
Science and Technology, College of.....	179
Social and Behavioral Sciences, School of .....	113
Social Work, School of.....	166
Admissions Doctoral Program .....	173
Doctoral Degree Requirements .....	174
MSW Program .....	166
MSW Degree Requirements .....	167
Sociology Program .....	114
Special Education Program.....	77
Sport Science .....	89
Standards for Academic Progress .....	14
Statement of Purpose, University.....	5
Student Participation in Institutional	
Governance .....	23
Student Records, Policy on .....	22
Student Responsibility Statement .....	15
Honor Code.....	15

## **T**

Teaching (Alternate Route, MAT).....	75
Technology Transfer.....	28
Time Limits .....	11, 17
Transfer of Credit.....	11
Tuition and Fees .....	15
Examination Charges .....	15
Thesis and Dissertation Fees.....	15
Tuition, Full Time Students. ....	15
Tuition, Part Time Students .....	15
Withdrawal and Refunds.....	15

## **U**

Undergraduate Enrollment in Graduate Courses.....	18
Undergraduate/Graduate Course Credit .....	18
University Press of Mississippi.....	30
Urban Higher Education, Doctoral Program .....	90
Urban and Regional Planning, Department of.....	158
Doctoral Program.....	161
Master of Arts Program.....	158

## **V, W, X, Y and Z**

Veterans and Military Center .....	23
WJSU and JSU-TV .....	31