

# The Graduate School

The Dean of the Graduate School administers and coordinates the graduate programs of the University. Graduate instruction is supervised by the appropriate academic deans, directors of graduate studies, department heads, and graduate faculty under policies set forth by the University of Louisiana System and the Graduate Council chaired by the Dean of the Graduate School. The President of the University is the final local authority in the operation of the graduate program.

## Student Responsibility

Each graduate student must assume the responsibility for becoming knowledgeable concerning Graduate School regulations and requirements.

## Graduate Programs

Graduate degrees granted by the University are

Master of Arts  
Master of Business Administration  
Master of Education (Fifth-Year Program)  
Master of Fine Arts  
Master of Professional Accountancy  
Master of Science  
Doctor of Business Administration  
Doctor of Education  
Doctor of Philosophy  
Joint MD/PhD with LSUMC-Shreveport

The graduate degrees and curricula, by colleges, are as follows:

### College of Administration and Business

Master of Business Administration  
Master of Professional Accountancy  
Doctor of Business Administration

### College of Applied and Natural Sciences

Master of Science; curricula available as follows:  
Biology  
Family and Consumer Sciences  
Nutrition and Dietetics

### College of Education

Master of Arts; curricula available as follows:  
Counseling and Guidance, concentrations in  
School Counseling  
General Counseling  
Educational Psychology  
Industrial/Organizational Psychology  
Master of Science; curricula available as follows:  
Curriculum and Instruction  
Health and Physical Education  
Master of Education 5th-Year Program/Certification; concentrations in  
Art Education  
Business Education  
Elementary Education  
English Education  
Foreign Language Education  
Health and Physical Education  
Mathematics Education  
Music Education  
Science Education  
Social Studies Education  
Speech Education  
Vocational Agriculture  
Doctor of Education; curricula available as follows:  
Curriculum and Instruction  
Educational Leadership  
Doctor of Philosophy; curricula available as follows:

Counseling Psychology

### College of Engineering and Science

Master of Science; curricula available as follows:  
Chemistry  
Computer Science  
Mathematics  
Physics  
Manufacturing Systems Engineering  
Engineering, concentrations in  
Biomedical Engineering  
Chemical Engineering  
Civil Engineering  
Electrical Engineering  
Industrial Engineering  
Mechanical Engineering  
Doctor of Philosophy; curricula available as follows:  
Biomedical Engineering  
Engineering  
Interdisciplinary Engineering Ph. D. Program in Computational Analysis and Modeling  
Joint MD/PhD with LSUMC-Shreveport

### College of Liberal Arts

Master of Arts; curricula available as follows:  
English  
History  
Speech  
Speech-Language Pathology and Audiology  
Master of Fine Arts; curricula available as follows:  
Art

## Admission

Admission by transfer is permissible if the transferring student is eligible to re-enter the institution from which the applicant is transferring and **MUST** meet Tech's entrance requirements.

A student will not receive graduate credit for any course taken unless he or she has complied with the following admission procedures and has been accepted for admission to the Graduate School.

For admission to Graduate School, the applicant must satisfy all general admission requirements for Louisiana Tech University. Application forms for admission may be obtained from the Graduate School. All necessary official transcripts, standardized test scores, and admission application forms must be received in the Graduate School at least 4 weeks in advance of registration for the session in which the student expects to enroll. Transcripts must be mailed directly from the college/university to Louisiana Tech. Any credentials missing before a student's first complete term of enrollment will result in the student not receiving graduate credit, nor will an official Louisiana Tech academic transcript be provided to the student. Policies governing the submission of transcripts for all graduate students are as follows:

(1) Students in pursuit of a master's degree must submit **ALL** official undergraduate transcripts (regardless of the number of colleges attended in order to earn the baccalaureate degree) so that a full evaluation of the grade point average may be made. In addition, all transcripts of any graduate work attempted at other colleges and universities are required. Students applying for unclassified status must meet the same transcript requirements listed in this section.

(2) Those students in pursuit of a doctoral degree must submit **ALL** official transcripts (undergraduate and graduate) for evaluation of eligibility for these programs.

(3) Those students in pursuit of the "Master's Plus 30" program must submit only the official transcript certifying

receipt of the master's degree from a regionally accredited institution.

(4) Those students applying for transient status must submit only an official copy of a transcript certifying that they are actively pursuing an advanced degree at another institution.

(5) If permission to enter the Graduate School is given prior to graduation, this admission is automatically withdrawn if the Bachelor's degree is not awarded before the date of registration.

**Note to International Graduate Students:** Upon arrival at Louisiana Tech, an International Graduate Student must enroll for a minimum of one quarter in the program he or she was approved for and admitted to. After fulfilling this requirement, a student may apply for transfer to another program by following the Graduate School's admission procedures.

### Summary of Admission Procedures

1. Obtain application for Admission from the Graduate School at least 5 weeks prior to registration.
2. Return completed forms to the Graduate School at least 4 weeks prior to registration.
3. Request all necessary official transcripts and test scores be sent to the Graduate School. These documents must be received at least 4 weeks prior to registration.
4. Comply with any additional requirements of individual graduate programs as specified in this Bulletin. Additional requirements are available from the Director of Graduate Studies in the individual college to which you are applying. Please note that the deadline for these additional requirements may differ in each College.
5. Follow the registration procedure as outlined in the Quarterly Schedule of Classes ("The Racing Form") available from the University Registrar's Office during the appropriate registration period.

### Graduate School Admission

Certain minimum admission standards are established by the Graduate Council for the University. Each academic college has the prerogative to be more selective and to establish higher standards for its respective graduate students.

#### Graduate Non-Degree Admission Categories

**1. Unclassified:** Students seeking graduate credit but not seeking a higher degree must meet the same academic requirements for admission to Graduate School as students admitted to work toward a master's degree.

**2. Transient:** Students admitted to a graduate program at another institution wishing to take a course(s) for transfer credit may be allowed to take such a course(s) with the approval of the Director of Graduate Studies in the college in which he or she would normally enroll. A maximum of 12 hours of transient credit will be allowed. Transcripts shall note that such credit is for transfer only.

**3. Master's Plus 30:** Students who have earned a master's degree from a regionally accredited institution are admissible to the Graduate School on this basis. However, this action does not admit the student to any specific program of study within the Graduate School automatically.

**4. Extension:** Available to students at a Louisiana Tech Extension Site wishing to enroll in an extension course offering for graduate credit without applying for and being admitted to a graduate degree program. Students wishing to enroll in this category must produce an unofficial copy of their baccalaureate degree-posted transcript, meet course prerequisites, have a cumulative undergraduate GPA of 2.25 (or 2.5 on the final 60 semester hours), and must understand that they are not admitted to a degree program. A maximum of 9 semester hours of

graduate credit are allowed under this non-degree admissions category. Use of this credit toward a graduate degree at a later date will be determined by application and unconditional admission to the Graduate School for a valid graduate degree program.

### Admission to Graduate Degree Programs

#### Unconditional Admission

Unconditional admission requires that the applicant must have earned a bachelor's degree from a regionally accredited college, and the minimum grade point average to be considered for unconditional admission is 2.50 (4.0 system) on all work attempted or 2.75 on the last 60 hours attempted. The final decision rests with the Dean of the Graduate School and is based upon the recommendation of the admissions officials of the academic college the student wishes to enter.

Each graduate student seeking admission to a degree program will be required to take the standardized test(s) specified by the academic college. Applications for the appropriate test may be obtained from the Counseling Center, Keeny Hall 310. Those students qualifying for unconditional admission who have not submitted a standardized test score may be allowed to submit the test score during their first quarter of enrollment as a graduate student, unless otherwise specified by the appropriate college. Students who fail to submit a test score by the specified deadline will be dropped from graduate status until a satisfactory test score has been received; those students unconditionally admitted who do not submit a satisfactory test score will be subject to reexamination by the admissions officials of the appropriate academic college.

#### Conditional Admission

Conditional admission may be gained by those applicants not qualified for Unconditional Admission, while satisfying or validating his/her undergraduate deficiencies or meeting other conditions of admission. The minimum undergraduate grade point average to be considered for Conditional Admission is 2.25 (4.0 system) on all work attempted or a 2.50 average on the last 60 hours attempted. The applicant is given 9 hours in which to fulfill these stipulated conditions. If the conditions are not removed after 9 hours of course work, the applicant will be dropped from the Graduate School. The final decision rests with the Dean of the Graduate School and is based upon the recommendation of the admissions officials of the academic college the student wishes to enter.

Conditional status may be changed to unconditional status when a student earns a minimum of 9 hours of graduate credit at Louisiana Tech, provided he or she has fulfilled the conditions of admission and has a "B" average on all work pursued for graduate credit, including no grade lower than "C" and not more than one course with a grade of "C." When a student completes 9 hours of graduate credit and is not eligible for unconditional status, the student will be dropped from graduate status.

Each graduate student seeking admission to a degree program will be required to take the standardized test(s) specified by the academic college. Applications for the appropriate test may be obtained from the Counseling Center, Keeny Hall 310. Those students qualifying for unconditional admission who have not submitted a standardized test score may be allowed to submit the test score during their first quarter of enrollment as a graduate student, unless otherwise specified by the appropriate college. Students who fail to submit a test score by the specified deadline will be dropped from graduate status until a satisfactory test score has been received; those students conditionally admitted who do not submit a satisfactory test score will be subject to reexamination by the admissions officials of the appropriate academic college.

**Applicants for Readmission** to Tech must complete an application for admission when the student has not been enrolled for two or more quarters (except for the summer term), and a new application fee is required.

If a student has been out of school for only one regular quarter (excluding the summer term), then a written request for readmission should be made directly to the Graduate School. There is no application fee required for this process.

## Doctoral Program Admission

Applicants for admission to the programs of study leading to the doctoral degree either will be granted an unconditional admission or will be rejected. Admission shall anticipate a minimum preparation to proceed at the doctoral level of study and shall consist of a bachelor's degree from a recognized institution and a transcript demonstrating sufficient undergraduate preparation for advanced study in both major and minor fields. Usually, although not necessarily, the applicant will possess a master's degree. In addition to formal courses and credits demonstrating adequate preparation, an acceptable report on the Graduate Record Examination or a designated comparable standard instrument, such as the Graduate Management Admission Test, is required. Applications and other information may be obtained from the Counseling Center, Keeny Hall, Room 310.

A minimum of three references is required. A locally administered screening or qualifying examination, or an interview of the applicant may be required at the direction of the admitting college. It is emphasized that no quantitative standards are set and that admission is a judgment of the admissions officials of the appropriate college. These officials make their recommendation to the Graduate School Office.

The Dean of the Graduate School will receive and expedite the handling of all admission documents. Complete transcripts of the applicant's undergraduate and graduate record, and of all academic work taken at other institutions, must be submitted to the Graduate School in order to have a doctoral application considered. The applicant should consult the doctoral admission requirements for the appropriate college in order to determine that area's specific requirements as to test scores and other items. Each academic college has the prerogative to be more selective and to establish higher standards for its respective graduate students.

## Graduating Seniors as Part-Time Graduate Students

A graduating senior at Louisiana Tech University in the last quarter of his/her academic program who has a 3.0 or better average on all work attempted may be permitted to take a combined load of undergraduate courses and courses for graduate credit (500 level) not to exceed 12 semester hours with a limit of 4 hours for graduate credit. This permission is subject to the recommendation of the student's College Graduate Director with the written approval of the Dean of the Graduate School.

## Testing

Colleges require that a student wishing to enter Graduate School take the appropriate test(s):

- College of Administration and Business: Graduate Management Admission Test (GMAT).
- College Applied and Natural Sciences: Graduate Record Examination (GRE -general).
- College of Liberal Arts: Graduate Record Examination (GRE-general).

- College of Education: Graduate Record Examination (GRE-general).
- College of Engineering & Science: Graduate Record Examination (GRE-general).
- All international students are required to submit a score on the Test of English as a Foreign Language (TOEFL) before their applications can be evaluated. The test must be taken no earlier than two years prior to application. The minimum acceptable score on the paper-based TOEFL is 550. The minimum acceptable score on the computer-based TOEFL is 213.

For additional information and to register for these tests, contact the Counseling Center, P. O. Box 5255, Ruston, LA 71272. Telephone (318) 257-2488.

## General Requirements for All Advanced Degrees Courses

All 500-level courses are open to graduate students. Courses numbered in the 600- and 700-level generally require doctoral classification and are specifically associated with doctoral programs. There are courses numbered in the 400-level which are usually for seniors but may carry graduate credit. Graduate students taking 400- level courses for graduate credit are normally required to undertake additional work in order to bring the course requirements up to graduate level.

The semester hour is the unit of credit at Louisiana Tech. Most courses carry a credit of three semester hours. Credit for each course is indicated by a three-digit numerical description, for example, 0-3-3: the first number indicates laboratory contact hours per week; the second, lecture periods per week; and the third, credit in semester hours.

## Grade Requirement

To receive a graduate degree from Louisiana Tech University, a student must have a GPA of at least 3.0 on all work pursued for graduate credit while registered at Louisiana Tech, as listed on the student's transcript, and a GPA of at least 3.0 on all graduate courses listed on the student's approved plan of study. No grade lower than "C" and no more than two "C's" will count toward a graduate degree.

A student will be dropped from graduate status if his/her quarterly GPA or cumulative GPA, as listed on the student's transcript, drops below 3.0 on all work pursued for graduate credit at Louisiana Tech for three consecutive quarters. This rule applies to all graduate students whether they are currently pursuing a graduate degree or not.

**A graduate student unconditionally admitted to a graduate degree or graduate non-degree program (other than extension programs) will be placed on graduate academic probation if his/her quarterly or cumulative GPA, as listed on the student's graduate transcript, drops below 3.0 on all work pursued for graduate credit. The student will be allowed two additional quarters (three consecutive quarters total) to regain his/her good standing in graduate status by restoring their graduate cumulative GPA above the 3.0 minimum and providing he/she earns grades no lower than a "B" while on academic probation. A student will be dropped from graduate status to post-baccalaureate status if he/she does not fulfill the requirements to be restored from graduate academic probation to unconditional graduate status during the three consecutive quarters. The student will be required to appeal his/her dismissal from the graduate program through the appropriate individual(s) in his/her College to the University Graduate Council to be reinstated to graduate status.**

**A graduate student conditionally admitted to a graduate degree or graduate non-degree program is not eligible for graduate academic probation and therefore must maintain a**

**3.0 graduate average while completing the conditions of their graduate admission.** Failure to achieve a quarterly and cumulative graduate GPA of 3.0 or better will result in the student being dropped from graduate status to post-baccalaureat status. The student will be required to appeal his/her dismissal from the graduate program through the appropriate individual(s) in his/her College to the University Graduate Council to be reinstated to graduate status.

Transfer credit for graduate courses will be posted on the student's transcript only by written request from the student's graduate committee chairperson and approved by the college graduate director. Transfer credit will be posted only for courses listed on the student's approved plan of study.

### System of Grading

Official grades are maintained in the University Registrar's Office. Tech applies a traditional system of grading and awarding quality points for grades earned. An "A" is awarded for the highest degree of excellence that is reasonable to expect of students of exceptional ability and application. A grade of "B" is superior. A grade of "C" is average. A grade of "D" is given for a quality of work that is considered the minimum for receiving credit for the course. A grade of "F" is given for a failure, and the work must be repeated to receive academic credit. The University's system of grading is as follows:

Grade	Quality Points
A	4 quality points per semester hour
B	3 quality points per semester hour
C	2 quality points per semester hour
D	1 quality point per semester hour
F	0 quality points per semester hour
I	Incomplete (see explanation below)
S	Satisfactory (see explanation below)
W	Withdrew (see explanation below)
NC	No Credit (see explanation below)

The grade "I" (Incomplete) is used to denote failure to complete all assigned class work and/or examinations as a result of *conditions beyond the student's control*. **It is the responsibility of the student to initiate a request with the instructor that a grade of "I" be issued.** If the student's work is of passing quality, the instructor may approve the student's request and will assign a grade of "I" plus the average letter grade on all work completed to that point (e.g., IA, IB, IC, or ID). A grade of "IF" cannot be issued. If the instructor agrees to issue an "I," he/she will complete a standard "contract" with the student detailing requirements for course completion and specifying the date those requirements must be finished within published time limits. Instructors then provide copies of the contract to the student, the department head/director, the director of graduate studies in the student's college, and to the Dean of the Graduate School. Students will receive a grade of IA, IB, IC, or ID on their grade report (and transcript) for that quarter. Incomplete grades are factored into hours attempted and quality points awarded. Therefore, they impact a student's quarter and cumulative grade point averages and are a factor in decisions affecting graduate academic probation or removal from the graduate program. The maximum amount of time allowed for a student to finish incomplete work is Friday of the fourth week in the following quarter, with one exception: students receiving an "I" in the Spring Quarter have until Friday of the fourth week in the following Fall Quarter to complete their work. A reminder of this date is published in the academic calendar each quarter and can also be found on the academic calendar at Tech's website [www.latech.edu](http://www.latech.edu). If the student does not complete the required work within the contracted period, the instructor will change the "I" to an "F" by delivering a final grade change to the Registrar's

Office by Friday of the fifth week of the quarter. The final grade replaces the "I" on the student's permanent record (transcript); attempted hours, earned hours, quality points, and quarter/cumulative grade point averages are recalculated applying the final grade. A student may be placed on or removed from academic probation, or removed from the graduate program based on the recalculated GPA at the time an "I" grade is cleared. "I" grades are cleared only by completing the required course work, and not by registering for the course again. **NOTE:** Students registered for approved graduate research, practicum, dissertation, or thesis courses requiring multiple quarters of the same course registration to complete the research receive an "I" for each attempt until the research or practicum is accepted as complete by the advising faculty member. At that time, the graduate student's "I" grades are changed to "S" on his/her permanent record.

A grade of "S" indicates satisfactory completion of a course. The "S" grade increases hours earned but does not affect hours attempted or quality points earned and is not computed in any grade point average (GPA). Students registered for a course where the grade of "S" is used who do not complete the required course work will receive the grade "F."

A "W" is issued when a student withdraws from a class (drops a class) after the final date for registration has passed and before the end of the first seven weeks of a quarter. The "W" grade will appear on the student's grade report and permanent record (transcript) but is not included in computing the student's GPA. Students who stop attending class(es) without following proper drop/withdraw or resignation procedures (walk-away) will receive an "F" grade for each class affected.

The grade "NC" is used to denote no credit for undergraduate developmental courses only and does not apply to graduate-level work.

### Grade Point Average

A student's **quarterly GPA** is obtained by dividing the sum of the quality points earned for the quarter by the number of semester hours attempted that quarter. The **cumulative GPA** is determined by dividing the total quality points earned by the total number of hours attempted. Quarterly and cumulative GPA's appear on the student's transcript. **NOTE:** Graduate GPA's and graduate transcripts are maintained separately from any undergraduate career work maintained within the Student Information System.

An **earned GPA** is computed by subtracting any non-repeated "F" grade hours, repeated course hours, and associated quality points from the respective cumulative totals and then recalculating the average. The earned GPA is used to determine eligibility for progress into and completion of a certification program, a practicum, and most importantly all courses pursued for graduate credit will be counted in the grade point average for receipt of a degree. The earned GPA does not appear on the student's transcript. The earned GPA is maintained by the specific college in which the student is enrolled.

### Registration and Classification

Graduate students will conform to the registration schedule of the University and may not enter later than the last allowable date set by the University Registrar. Students requiring a faculty member's time and assistance, laboratory facilities, library services, etc., while engaged in research, or preparing for or taking examinations, must register for a minimum of three hours of graduate credit in 551, 590, 690, or Education 580.

Before registering, a graduate student must obtain his or her advisor's approval of his/her proposed program (plan of study).

## Academic Misconduct

Academic misconduct at the University is determined by the faculty member, committee, or other supervisor(s) under whom such misconduct occurs. The misconduct may occur in an individual class, a comprehensive examination, a practicum, an internship, a thesis or dissertation, a research project, a multi-quarter sequence of courses, or any other academically related matter or setting. Penalties may range from dismissal from the University or an academic degree program to a failing grade or lesser penalty as determined by the faculty member, Plan of Study committee, or supervising authority. The student has the right to appeal the charge of academic misconduct in accordance with the Final Grade and Appeals Procedure and/or the Graduate Student Academic Appeals Procedure.

## Final Grade & Academic Appeals Procedure

A final grade in a course represents the cumulative evaluation and judgment of the faculty member placed in charge of that course. If a student feels the final grade or an academic decision in a course was not determined in accordance with University policies, the published syllabus, or was determined arbitrarily, the student may appeal by adhering to the following procedure:

1. **Confer with the faculty member**, setting forth clearly all points of concern. If the student remains unsatisfied with the results of this conference, then,
2. **Confer with the head of the department** in which the course is taught, setting forth clearly all points of concern. If the student remains unsatisfied, then
3. **Write a letter of appeal to the dean of the college in which the course is taught.** The dean will send copies of the letter to the faculty member and department head. This letter must (a) be received by the dean within the first ten (10) regularly scheduled class meeting days of the term immediately following the term in which the appealed grade was received and (b) be an accurate and complete statement of all facts pertaining to the matter. Falsification may result in disciplinary action.

The dean may make a decision, which would be final in the matter, or refer the appeal to the college's committee on standards for review and recommendation. The committee's report would be a recommendation to the dean, whose decision would be final. In reviewing the appeals, both the dean and committee would have broad latitude in their procedures and recommendations. They might, for example, request additional information privately from those involved. Or they might choose to invite specified persons, including the student and faculty member, to a meeting to discuss the matter. Whatever their approach, it should take appropriate account of the interests of both the student and faculty member.

In the case where a grade penalty is given to a student because of academic misconduct, the student has the right to appeal the grade penalty as well as the charge of academic misconduct in accordance with the grade and academic appeals procedure.

In all cases the dean shall communicate the final decision to the student, faculty member, department head, and, if a grade change is involved, to the University Registrar. In appeals where the dean initially makes the decision, the decision should normally be communicated to the student within ten (10) class days after the appeal deadline. When appeals are referred to the committee, the final decision should normally be communicated to the student by the dean within twenty (20) class days after the appeal deadline.

## Graduate Student Academic Appeals Procedure

Recognizing the unique attributes of graduate study, Louisiana Tech University has adopted policies pertaining to the appeal process for issues faced by graduate students. The following policy will be followed by graduate students wishing to appeal decisions related to their status as graduate students or their progress in graduate programs. This policy is to be followed by students wishing to pursue appeals beyond the college to which they have been admitted.

1. **Form:** Graduate student appeals must be presented in writing to appropriate University personnel, as described below. Appeals shall detail the issue to be addressed and a proposed solution to students' appeals.
2. **Timeliness:** A student must initiate an appeal of a college-level decision within ten (10) University class days of the college-level decision being communicated to the student. Each subsequent appeal must be made within ten (10) University class days of the student being advised of the previous level appeal decision.
3. **Levels of Appeal:** An appeal of a college-level decision must first be made to the Dean of the Graduate School. A student may appeal the decision of the Dean of the Graduate School to the University Graduate Council. A student may appeal the decision of the Graduate Council to the Vice President for Academic Affairs. A decision of the Vice-President of Academic Affairs may be appealed to the President of Louisiana Tech University.

## Financial Aid for Graduate Students

Louisiana Tech University provides equal educational opportunities for all graduate students, and this policy of equal opportunity is fully implemented in all programs of financial aid to assist students in obtaining an education at Louisiana Tech.

An extensive financial aid program encompassing employment, loans, and scholarships is available to assist students. Need, skills, and academic performance are carefully weighed to develop a "financial package" for qualifying graduate students.

Employment is available in a wide variety of forms to the graduate student who is willing to work. Areas of work include but are not limited to clerical, maintenance, food service, laboratories, library, and dormitories. Pay rates are commensurate with the skill and experience required, and work is limited to avoid interference with academic pursuits. The University participates in the Federal College Work-Study program designed to assist students with financial need in addition to employment available through individual departments on campus.

The student is advised to make inquiries at the Office of Student Financial Aid in person or by writing P. O. Box 7925, Ruston, Louisiana 71272-0029 in January prior to Fall enrollment.

Graduate students must be admitted and enrolled in their degree program in order to qualify for their federal assistance. Federal regulations stipulate that any undergraduate and graduate student must be enrolled "in an eligible program for the purpose of obtaining a degree, certificate, or other recognized credential." Non-degree students do not qualify for financial aid. Requirements for admission into the Master's or Doctoral programs are listed in the Graduate School section of this Bulletin. Before graduate students can be considered eligible for any financial assistance, they must meet all admission standards as specified by the Graduate School and their academic college. Students admitted as Unclassified, Transient, Master's Plus 30,

and Extension who are not education majors seeking a teaching certificate are considered enrolled in a non-degree program, and, therefore, are not eligible to receive financial aid. All inquiries regarding these standards should be referred to the Graduate School or to the appropriate Academic Dean.

Graduate students must meet the requirements for "satisfactory progress" in order to be eligible for participation in the programs of student financial aid at Louisiana Tech University. What constitutes "satisfactory progress" and the consequences of failure to meet them successfully are applicable to the financial aid programs in a different fashion from regulations governing academic probation and suspension. Federal regulations frequently mandate amendments to established policies; consequently, financial aid participants (and potential participants) would be well-advised to maintain close liaison with the financial aid office regarding these requirements.

All applicants for federal financial assistance must complete their file in the financial aid office at least two months prior to the beginning of the quarter for which they seek to receive aid. Priority is given to applications received by or before published deadlines. The following sources of financial assistance are available to eligible students, providing funds are available.

#### **Monthly Payment Options for Students and Families**

Tuition Management Systems offer families several Monthly Payment Options to help make education expenses more affordable. The Interest-Free Monthly Payment Option enables families to spread all or part of the annual expenses over equal monthly payments. There are no interest charges and only a small annual fee. This plan includes life insurance protection covering the unpaid balance at no additional cost. Additionally, low-interest monthly payment options, including an unsecured loan, a home equity credit line, and federally backed loans, are also available. Please contact Tuition Management Systems at 1-800-722-4867 or 401-849-1550 for more information on these programs.

#### **Federal Perkins Loan Program**

A Perkins Loan is a low-interest loan designated to help undergraduate and graduate students pay educational costs. A graduate student may borrow up to an aggregate for all years of \$30,000. A new student borrower has a nine-month "period of grace" after the student ceases to be enrolled on at least a half-time basis at the University before repayment must begin.

#### **Subsidized and Unsubsidized Federal Stafford Loan Program (Formerly Guaranteed Student Loan Program)**

Stafford loans are available for students meeting certain qualifications. Loans are made up to \$8,500 per year for Subsidized Stafford and \$10,000 per year in the Unsubsidized Stafford for graduate students. Aggregate loan limits are \$138,000 for graduate/professional students of which no more than \$65,000 of this amount may be in subsidized loans. The graduate debt limit includes any subsidized Stafford Loans received for undergraduate study.

After a student's application has been processed by the Office of Student Financial Aid, his/her Stafford loan is electronically certified and submitted for guarantee. He/She will receive a promissory note from the Guarantee agency which he/she must complete with references and return to his/her lender, credit union, or savings and loan association. This process may take three weeks before funds are available. Under the Subsidized Stafford Loan Program, interest charges to the student and repayments begin six (6) months after the student is no longer at least a half-time student. In the Unsubsidized Stafford Loan Program, interest does accrue while the student is enrolled on at least a half-time basis and students are required to

make interest payments while in school or have the interest capitalized. To apply, students must complete the Free Application for Federal Student Aid (FAFSA) and a Louisiana Tech Financial Aid Data Form.

#### **Academic Scholarships**

Louisiana Tech University has a General Scholarship Program; in addition, each of the five colleges (Administration and Business, Applied and Natural Sciences, Education, Engineering & Science, and Liberal Arts) has its own scholarship program. Graduate students interested in applying should contact their academic college for more information.

Scholarships are divided into the following categories:

- **Academic Scholarships.** These scholarships are awarded on the basis of demonstrated ability--usually with regard to need.
- **Grant-in-aid and Service Awards.** Frequently, these are awarded on the basis of special skills and require the student to render a service to the University. Included in this category are scholarships in athletics, music, band, and academics.

#### **Vocational Rehabilitation Grants**

Vocational Rehabilitation is a public service program for physically and mentally handicapped individuals. To be eligible, a person must have a permanent disability which constitutes a job handicap. Graduate students with disabilities are advised to contact the Department of Vocational Rehabilitation in their districts for consideration of their cases.

#### **Veterans' Orphans Scholarships**

These scholarships are awarded to sons and daughters of deceased war veterans. Students apply to the Department of Veterans' Affairs in their district.

#### **Graduate Assistantships**

Assistantships for master's degree candidates and for students pursuing the doctoral program are offered. A student should check with the appropriate college for information concerning these assistantships.

In addition, a limited number of University Graduate Assistantships for master's and specialist students, and for doctoral students are available to outstanding students. Applications for University Assistantships should be in the appropriate college Graduate Director's Office by February 1 preceding the fiscal year for which application for admission is made (fiscal year begins July 1). An applicant must be eligible for admission to the Graduate School, must generally have an undergraduate grade point average of at least 3.50, and must submit a standardized test score required in his/her field. Forms for applying for an assistantship can be obtained from the Graduate School Office.

Federal regulations for student financial aid consider assistantships as a financial aid resource and must be calculated when determining a graduate student's financial aid award.

#### **Graduate Residentships**

Graduate residentships are positions appointed by the Director of Housing for graduate students serving as hall directors in both men's and women's residence halls. Applicants may be married or single. There are limited positions available for summer. The applicant must be enrolled as a graduate student and agree to register for not more than 6 hours of course work each quarter. Responsibilities include residence hall staff supervision, program implementation, and coordination of hall administration. Additional information and application forms can be obtained from the Department of Housing, Louisiana Tech.

## Student Loads

The maximum graduate credit course load for a graduate student is 12 semester hours in a regular session. Not more than 9 hours of this total may be 500- and 600-level courses which will include, in master's and specialist programs, research and thesis and/or special non-lecture courses, except with the permission of the student's director of graduate studies. Students who hold full-time assistantships in a regular session will be required to reduce the maximum load by 3 hours. In addition, the appropriate department may require further load reductions. For sessions shorter than one quarter, the maximum load will be 1 hour of graduate credit for each week of the session.

Six graduate semester hours are considered full-time for a graduate student, and 3 graduate semester hours are half-time status. A student receiving a full-time assistantship must be qualified as a full-time graduate student. A graduate degree candidate may carry only the courses required for graduation at the end of the quarter and still be considered a full-time student.

## Language Examinations

Language reading and proficiency examinations are scheduled once each quarter. Candidates must pre-register for the examination they wish. Schedules and regulations concerning foreign language reading and proficiency examinations may be obtained from the Director of the School of Literature and Languages.

## Graduation

Commencement exercises are held and advanced degrees may be conferred at the close of any quarter, including the Summer Quarter. A student who is scheduled to receive a degree at the end of a quarter is expected to attend the commencement exercises. Degree candidates are required to arrive at the place of assembly no later than one half hour before commencement exercises are scheduled to begin.

The applicant for graduation must be registered at Louisiana Tech University. Applications for graduation must be reported to the appropriate director for graduate studies and to the University Registrar within the first four weeks of the quarter in which the student expects to graduate. Arrangements for caps, gowns, and hoods should be made in the University Bookstore.

## General Requirements for All Masters' Degrees

Some departments impose degree requirements that are more restrictive than the general requirements. The student is advised to check the department or college section of the Bulletin for the area of study to be pursued.

## Advisory Committee

Advisors are assigned to each student upon approval for admission to the Graduate School. After consultation with the advisor and/or department head, the academic dean will be requested to appoint an Advisory Committee consisting of three to five members of the graduate faculty. It will be the responsibility of the Advisory Committee to counsel with the student and to develop a Plan of Study that is then filed with the Graduate School. Any graduate student following a degree program who has not submitted a Plan of Study by the end of the first quarter of graduate study will not be allowed to register as a graduate student until a Plan of Study has been submitted. Any later revision in the Plan of Study should be reported. A final Plan of Study must be completed and submitted to the Graduate School prior to graduation.

## Minimum Credit Requirement

The minimum credit requirement for the master's degree is 30 semester hours of graduate work, not more than 6 of which may be allowed for research and thesis. In optional programs not requiring a thesis, the standard course requirements should not be less than 30 hours. Students who do not write a thesis must demonstrate acceptable proficiency in research and reporting. A minimum of one-half of the credit for the degree must be in courses open only to graduate students.

## Transfer Credits

Upon approval of the department involved, a maximum of 12 semester hours of graduate resident credit, or 1/3 of the hours required for the master's degree, may be transferred for degree credit from a U. S. regionally accredited college or university. The grade earned must be "B" or above, and the credits must be accepted as applicable to the master's degree program by the student's academic college. No correspondence credits are applicable toward a master's degree.

## The Thesis

The requirement of a thesis varies within the University; therefore, the prospective student should check the college and/or departmental sections of the Bulletin for their stipulations. General requirements, applicable to all graduate students meeting this thesis requirement (regardless of the field of study in which they pursue their work) are enumerated below.

A thesis subject should be selected by the student in consultation with the student's advisor and must be approved by the Advisory Committee. With permission of the Advisory Committee, a student not in residence but who has satisfied all course requirements may complete the thesis "in absentia."

The research and thesis must be certified by registration in and completion of all requirements of the research and thesis courses numbered 551. If the student does not complete the course during the quarter in which he or she is registered for it, an incomplete or "I" grade will be given in the course until such time as all requirements are completed, including the thesis. The limit on clearing this grade is 6 years from initiation of the graduate program or graduation, whichever comes first.

The thesis, in order to be approved, must be written in correct English and in scholarly form. It must show independent thought, both in its recognition of a clearly defined problem and in its method of treatment. It must reveal the sources of information and a knowledge of the bibliography of a special field. If a student's thesis contains proprietary information that the student wishes to retain as proprietary after submitting his or her thesis to the Graduate School and the Library, the student is permitted, based upon the recommendation of the chairperson of the committee responsible for approval of a student's thesis to the Graduate School, to substitute sample data for actual data, facsimile illustrations for actual illustrations, and "what-if" situations for actual situations, as appropriate, in the document being released to the public domain. The student will include an appropriate disclaimer in the thesis to state that samples, facsimiles, etc., are being substituted for proprietary information in the document being released to the public domain.

The publication "**Guidelines for the Preparation of Your Thesis or Dissertation**" is available in the Graduate School Office and should be used as a guide in the preparation of the thesis. The thesis must be submitted to the college director of graduate studies 10 working days before the expected date of graduation, to the Dean of the Graduate School 7 working days before the expected date of graduation, and to Prescott Memorial Library 2 working days before the expected date of graduation. The director of graduate studies in each academic college will notify the academic dean and the Graduate School Office that the candidate has completed all requirements other than the final

quarter's grades and is eligible to receive the appropriate degree prior to graduation

Students requiring a faculty member's time and assistance, laboratory facilities, library services, etc., while engaged in research will be required to register and pay fees.

### **Examinations**

Oral and/or written comprehensive examinations will be administered by the Advisory Committee sufficiently in advance of graduation in order that the dean of the academic college (or a representative) in which the student is a candidate for a graduate degree may notify the Graduate School Office. This notification should be made at least one week before commencement and should state that all requirements have been satisfied, contingent upon satisfactory grades for the final quarter. Otherwise, the candidate will be delayed one quarter in receiving his or her degree. A student who does not successfully pass the comprehensive examination is entitled to one repeat examination.

No oral or written comprehensive is required for the MBA and MPA.

### **Time Limit for Degree**

A time limit for the completion of all requirements for the master's degree has been set at 6 consecutive calendar years from the time of initial enrollment. Failure to do so will result in the student's immediate suspension from the master's degree program. Reinstatement appeals should be directed to the Dean of the Graduate School and the Graduate Council through the college director of graduate studies. The Graduate Council shall stipulate the conditions of possible reinstatement.

### **A Second Master's Degree**

A student pursuing a second master's degree must earn a minimum of 15 additional graduate hours at Louisiana Tech and must satisfy the requirements for a minimum number of exclusive graduate courses, in addition to the thesis if required, to be taken in the area in which the second degree is being earned. Some colleges may require more than 15 hours. Transfer hours will not be approved on a second master's degree.

## **General Requirements for All Doctoral Degrees**

The doctoral degree is not awarded on the basis of completion of a course of study, however well done. Instead, the degree is earned by intensive individual study, inquiry, and original research by a well-qualified candidate under the close supervision of appropriate graduate faculty. The program must be tailored to the needs and interests of the candidate and to the needs and demands, present and future, of his or her profession. As a result, the modern doctoral candidate must expect to exhibit or develop a high level of competency and habits and skills of individual inquiry and original research which characterize the doctorate. Consequently, it is neither possible nor desirable to set firm and rigid requirements.

Because of the unique nature of each doctoral program and external programmatic constraints such as accreditation guidelines, the university-authorized requirements for individual doctoral programs may be more rigorous than the general requirements listed in this section or as specified by the State Board of Supervisors. Students interested in these programs should refer to listings under individual colleges or on appropriate college web sites.

### **Minimum Credit Requirement**

Formal course work is of indisputable value to bring the student into a scholarly relationship with members of the graduate faculty and to demonstrate accepted knowledge of a subject. A program leading to a doctoral degree normally shall be the equivalent of at least 3 years of graduate study beyond the baccalaureate degree.

### **Transfer Credits**

Upon approval of the department involved, there would be no limit at the doctoral level regarding transferring courses for degree credit from a U. S. regionally accredited college or university. The grade earned must be "B" or above, and the credits must be accepted as applicable to the degree program by the student's academic college. No transfer credit for extension courses will be accepted.

### **Plan of Study**

During the first quarter in which students are enrolled in Graduate School, they report to the appropriate Director of Graduate Studies to request the appointment of a committee, with responsibilities including counseling with the student to develop a Plan of Study. A copy of this Plan of Study must be filed with the Graduate School Office during the student's first quarter of enrollment in a graduate degree program. Any graduate student who has not submitted a Plan of Study by the end of the first quarter of graduate study will not be allowed to register as a graduate student until a Plan of Study has been submitted. All formal course work must be approved as acceptable for graduate credit. A final Plan of Study must be completed and submitted to the School prior to graduation.

### **Majors and Minors**

It shall be the responsibility of the student's Advisory Committee to explore with him or her and, subsequently, to define for the student his or her obligations toward majors and minors. The general content and scope of these majors for the disciplines involved shall have been approved by the Graduate Council and shall be so framed that their integrity is served in the administration of the program.

### **Research and Dissertation**

The dissertation is required of all candidates for the doctoral degree and must be supported by adequate research and independent study of a problem of reasonable scope under the close supervision of appropriate graduate faculty. A minimum of 15 semester hours credit is granted for this research and dissertation through the medium of appropriate registrations as guided by the student's Advisory Committee. Grades of "I" and "S" are used for these courses. The dissertation must be submitted to the appropriate director of graduate studies at least 10 working days before the expected date of graduation, to the Dean of the Graduate School at least 7 working days before the expected date of graduation, and to Prescott Memorial Library 2 working days before the expected date of graduation. If a student's dissertation contains proprietary information that the student wishes to retain as proprietary after submitting his or her dissertation to the Graduate School and the Library, the student is permitted, based upon the recommendation of the Chair of the committee responsible for approval of a student's thesis/dissertation to the Graduate School, to substitute sample data for actual data, facsimile illustrations for actual illustrations, and "what-if" situations for actual situations, as appropriate, in the document being released to the public domain. The student will include an appropriate disclaimer in the dissertation to state that samples, facsimiles, etc., are being

substituted for proprietary information in the document being released to the public domain.

The publication "**Guidelines for the Preparation of Your Thesis or Dissertation**" is available in the Graduate School Office and should be used as a guide in the preparation of dissertations. The University participates in the service for publication of doctoral dissertations provided by University Microfilms. Each abstract is published in "**Dissertation Abstracts**," along with a positive copy which is sent to the Library of Congress. The doctoral candidate is advised to check with Prescott Memorial Library concerning this program.

### **Examinations and Admission to Candidacy**

After completion of a minimum of two full academic years of graduate work after compliance with any other requirements of the appropriate academic college, comprehensive examinations (general examinations) are required to determine whether the student is ready to be admitted to candidacy for the doctoral degree. The results of these examinations may also determine additional work to be taken and may determine the feasibility of the dissertation project.

An examination defending the dissertation must be completed successfully at least two weeks prior to the date the degree is expected to be received.

### **Residence Requirement**

The minimum residence requirement for the doctoral degree shall be eight quarters beyond the bachelor's degree. The student is required to spend at least three quarters beyond the first year of graduate study in continuous residence. The transfer of course work from a recognized graduate school carries with it the transfer of residence credit, but a minimum of 24 semester hours of graduate credit beyond the first year of graduate study must be earned in residence at Louisiana Tech University.

### **Time Limitation**

The doctoral degree must be completed within 6 consecutive calendar years after the successful completion of the student's comprehensive (general) examinations. Failure to do so will result in the student's immediate suspension from the doctoral degree program. Reinstatement appeals should be directed to the Dean of the Graduate School and the Graduate Council through the college director of graduate studies. The Graduate Council shall stipulate the conditions of possible reinstatement. The Dean of the Graduate School administers and coordinates the graduate programs of the University. Graduate instruction is supervised by the appropriate academic deans, directors of graduate studies, department heads, and graduate faculty under policies set forth by the University of Louisiana System and the Graduate Council chaired by the Dean of the Graduate School. The President of the University is the final local authority in the operation of the graduate program.

# Graduate Program Interdisciplinary Ph.D. Program in Computational Analysis & Modeling (CAM)

## Officers of Instruction

Kody Varahramyan  
Assoc. Dean for Research & Graduate Studies,  
College of Engineering and Science  
Chee Hung Ben Choi  
Ass't Professor, Computer Science  
Weizhong Dai  
Assoc. Professor, Mathematics & Statistics  
Richard J. Greechie  
Professor, Mathematics & Statistics  
Chaoqun Liu  
Professor, Mathematics & Statistics  
Raja Nassar  
Professor, Mathematics & Statistics  
Balachandran Ramachandran  
Interim Academic Director, Chemistry &  
Physics

## Admission Requirements

1. A master's degree in one of the science or engineering disciplines is recommended but not required. Exceptional students with a bachelor's degree in an appropriate area will be considered.
2. A GRE score of at least 1150 (V+Q)
3. International students are required by the Graduate School to submit an official TOEFL score of 550 or higher before their application will be evaluated.

## Ph.D. in Computational Analysis and Modeling (CAM)

The Ph.D. program in Computational Analysis and Modeling is an interdisciplinary doctoral degree program with participation from the College of Engineering and Science and the College of Applied and Natural Sciences.

The program is intended to produce professionals who have a firm grasp of the fundamentals of mathematical modeling and who have the expertise to implement, analyze, and evaluate such models using state-of-the-art computing environments and advanced visual data analysis techniques.

Persons who hold a master's degree in a branch of the physical or biological sciences, engineering, computer science, or mathematics are eligible for admission to the program. Students with baccalaureate degrees may be admitted in exceptional cases. Application forms are available from the Graduate School or the Office of the Associate Dean for Research and Graduate Studies, College of Engineering and Science. Applicants will be required to submit undergraduate and graduate transcripts, current GRE scores and three letters of recommendation. A minimum score of 1150 (Verbal + Quantitative) on the GRE is required for admission.

## Core Requirements, Course Work and Dissertation

Typically, 72 hours of graduate work will be required for the degree. The Core consists of 15 graduate hours of mathematics, 9 graduate hours of computer science, and 9 graduate hours of an area of application chosen from chemistry, physics, biology, forestry, statistics, or a participating engineering discipline. An initial plan of study must be submitted by the end of the first

quarter of study. The remaining hours of graduate work will consist of courses designated by the student's committee, including research hours for the dissertation.

The student's area of application must be declared within his/her first year in the program. NOTE: The dissertation need not be written in the area of application. It may be written in mathematics, computer science, or possibly another area included in this program. The topic of the dissertation will be the Area of Specialization.

## Student's Committee

Each student will be assigned an **Interim Committee** no later than his/her second quarter in the program. This committee will consist of at least 3 members, one from Mathematics and Statistics, one from Computer Science and one from the student's area of application, if such has been declared. The student's interim committee will be replaced by a **Doctoral Committee** within one year of his/her having passed the qualifying exam. Each student's Doctoral committee shall consist of a minimum of 4 members of the graduate faculty, approved by the steering committee after consultation with the relevant departments. It will be composed of the major professor (once one is chosen), at least one representative from the mathematics and statistics program, at least one from the computer science program, and at least one from the student's area of specialization. This committee will work with the student to design suitable work for the degree.

## Exam Structure, Candidacy and Time Limitation

The **qualifying exam** will consist of written examinations in mathematics and in computer science and an appropriate exam in the area of application. The qualifying exam in the area of application may consist of the master's degree in that area. Special permission from the Dean of the Graduate School is required to take any one of these exams more than twice.

Within one year of passing the qualifying exam, a student is normally expected to pass a **comprehensive exam** in his/her area of specialization (which may be mathematics, computer science, the area of application, or some other area included in this program). The comprehensive exam will include a lecture followed by a question/answer period on the student's proposed dissertation topic that exhibits a clear demonstration of an understanding of the principles and methods involved in his/her proposed area of specialization.

After the student has successfully passed the comprehensive examination, the student will be admitted to **candidacy**. The student must complete the dissertation and pass the **dissertation defense exam** within six years after being admitted to candidacy. The dissertation defense exam is administered by the student's Doctoral Committee. It will, in most cases, consist of an open public defense of the results of the dissertation. This final exam must be successfully completed at least two weeks prior to the date the degree is expected to be received.

Those serving on the doctoral committee must recommend, with at most one dissent, that the student has satisfactorily passed the dissertation defense exam.

**Timetable:**

**Matriculation** - Interim Committee assigned no later than a student's second quarter in the program. An initial plan of study must be submitted by the end of a student's first quarter of study. Area of application must be declared within the first year.

**Qualifying Exam** - 1st Fall Quarter following three quarters in the program. Written examinations in mathematics and computer science; appropriate exam in area of application (may consist of master's degree).

**Doctoral Committee** - Chosen within 1 year of passing the qualifying exam. Minimum of 4 members appointed as described above.

**Comprehensive Exam** - (In area of specialization, the area in which the dissertation is written) Within 1 year of passing the qualifying exam.

**Admitted to Candidacy** - Upon passing the comprehensive exam, the student now has a maximum of 6 years to complete the dissertation and pass the dissertation defense exam in order to graduate.

# Graduate Programs

## College of Administration and Business

### Officers of Instruction

Interim Dean  
Gene H. Johnson  
Interim Assoc. Dean for Graduate Affairs & Academic Research  
Marc C. Chopin  
Assistant Dean for Undergraduate Affairs  
Elizabeth A. Wibker  
Director, Division of Business & Economic Research  
Marc C. Chopin  
Head, Department of Economics & Finance  
Dwight C. Anderson  
Head, Department of Management & Marketing  
Mark Kroll  
Head, Department of Business Analysis & Communication  
Thomas L. Means  
Director, School of Professional Accountancy  
Thomas J. Phillips, Jr.,

The College of Administration and Business offers the Master of Business Administration degree, the Doctor of Business Administration degree, and the Master of Professional Accountancy degree. The Undergraduate Division provides a broad range of programs. The third division of the college, the Research Division, has an extensive and growing research program.

Graduate programs in business are designed to prepare students to engage in professional and/or administrative careers in business and government, and to enter the academic community. Students may enter the masters and doctoral programs any quarter. Each graduate student has an advisor to help plan his/her program and tailor it to individual needs and objectives. In the college, no grade lower than "C" will be accepted on courses taken for graduate credit in a student's degree program. Also, no more than two "C"s will count toward a graduate degree. All courses pursued for graduate credit will be counted in the grade point average. To receive a graduate degree, a student must have an average of at least 3.0 on all work pursued for graduate credit while registered at Louisiana Tech.

### Accreditation

The baccalaureate and master's programs in accounting and business are accredited by the The International Association for the Advancement of Colleges and Schools of Business (AACSB). Louisiana Tech University is accredited by the Southern Association of Colleges and Secondary Schools (SACS). This accreditation covers the College of Administration and Business as one of the five colleges of the University and includes all curricula offered by the College. The Research Division, College of Administration and Business, is a fully accredited member of the Association for University Business and Economic Research (AUBER).

### Graduate Assistantships

A limited number of graduate assistantships are available each year to students of high academic accomplishment. The stipend for graduate assistants is \$7,200. The graduate student who holds an assistantship is expected to carry a reduced classwork load that will vary depending on scholastic record and amount of work required by the assistantship. Teaching assistantships are awarded to doctoral students. The salary paid for these part-time teaching assignments is \$15,000 annually.

### Master of Business Administration

The purpose of the Master of Business Administration (MBA) program is to offer an educational experience in business and management at the graduate level. The program is designed to provide breadth in exposure to the business disciplines and facilitate integration of knowledge of the various disciplines. It is an interdisciplinary and interdepartmental degree program offered by the Graduate Division and the academic departments of the College of Administration and Business. Ethical concerns and international issues are emphasized throughout the curriculum.

The interdisciplinary nature of the program is in consonance with the needs of future administrators. The acquisition of knowledge of many facets of administrative activities, the accumulation and organization of relevant information, and the identification and solving of complex business problems require such an interdisciplinary approach.

The curriculum leading to the MBA is administratively oriented and is characterized by breadth of course-field requirements. It does not require and, in fact, does not permit a major in any particular field. However, many students desire a modest concentration in an area such as Accounting, Computer Information Systems, Economics, Finance, International Business, Management, Marketing, or Quantitative Analysis. Such concentrations will consist of a minimum of nine hours and, as such, will increase the total number of hours necessary to complete the program. The courses to be taken by a student seeking a concentration will be determined by the student's advisory committee and approved by the Associate Dean for Graduate Affairs and Academic Research. Also, scheduling and resource constraints may limit the availability of concentrations from time to time.

### Admission Requirements

To qualify for admission to the MBA program, applicants must meet the admission requirements of the Graduate School of the University and the admission requirements of the Graduate Division of the College of Administration and Business. Any applicant who holds a bachelor's degree, or equivalent, from an accredited college or university will be considered for admission regardless of the undergraduate field of study. An applicant for admission should understand that graduate work is not merely an extension of undergraduate work. Graduate study operates at a significantly higher level of rigor, demands scholarship of a higher order, and places more emphasis on research and student responsibility.

Once the admission requirements of the Graduate School have been met, the MBA Admissions Committee will grant admission only to those individuals who demonstrate significant accomplishment and/or high potential for success. The decision of the Admissions Committee is normally based on a combination of the applicant's previous academic record and the applicant's score on the Graduate Management Admission Test (GMAT). Also, significant business experience may serve as an indicator of an individual's ability to complete the program, and thus may be considered by the Committee.

### Foundation Requirements

Students entering the MBA program may come from areas other than business, but need to demonstrate a knowledge base sufficient to enable them to complete graduate-level work in

business. Evidence of such foundation knowledge can consist of the completion of undergraduate courses constituting a business core, recent business experience, and/or satisfactory performance on the GMAT. At a minimum, each student is presumed to be computer literate and to have had recent, college-level course work in economics (Economics 215), calculus and linear algebra (Quantitative Analysis 390), statistics (Quantitative Analysis 233), and the following core areas:

- financial reporting, analysis, and markets,
- domestic and global economic environments of organizations,
- creation and distribution of goods and services,
- human behavior in organizations.

The Associate Dean for Graduate Affairs and Academic Research of the College of Administration and Business determines the acceptability of all work submitted in satisfaction of the foundation and prescribes appropriate courses to be taken to remove any deficiencies.

**MBA Curriculum - General\***

Quantitative Analysis 525 .....	3
Computer Information Systems 510.....	3
Economics 510 .....	3
Accounting 505.....	3
Finance 515 .....	3
Management 510 .....	3
Marketing 530 .....	3
Electives.....	6
Management 595 .....	3
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Total.....	30

**MBA Curriculum - With Concentration\***

Quantitative Analysis 525 .....	3
Computer Information Systems 510.....	3
Economics 510 .....	3
Accounting 505 .....	3
Finance 515 .....	3
Management 510 .....	3
Marketing 530 .....	3
Concentration Courses .....	9
Management 595 .....	3
<hr/>	
Total.....	33

\*The student who has recently completed an undergraduate program with specialization (major or minor) in one of the areas of business may be required to substitute a graduate business elective for the course in that area specified in the curriculum. For example, a student with an undergraduate degree in Accounting will be required to take Accounting 508 in lieu of Accounting 505.

**The Master of Professional Accountancy Program**

The Master of Professional Accountancy (MPA) program is designed to provide graduate level education in accounting for individuals seeking rewarding careers in public accounting, industry, and government. To be considered for admission to the graduate phase, students must submit an admissions application, an acceptable score from the Graduate Management Admission Test (GMAT) and meet established GPA requirements. Courses for graduate credit can be taken after completion of the first four years and after final admission to graduate school is attained.

Transcripts of students entering the MPA program at the graduate level are evaluated and proper courses prescribed to satisfy the degree requirements. The undergraduate phase of the

MPA program is given in the accounting section of the undergraduate portion of this bulletin.

The normal graduate phase of the MPA program is given below. The graduate phase may normally be completed in one year by accounting undergraduates who have performed satisfactorily in appropriate preparatory work.

Year 5	
Accounting 506 OR 507 .....	3
Accounting 508.....	3
Accounting 513.....	3
Accounting 521 .....	3
Accounting Electives** .....	9
CAB Electives (2 500-level non-accounting).....	6
Business Law 410.....	3
<hr/>	
	30

\*Total must include at least 15 hours of 500-level Accounting taken at Louisiana Tech.

\*\*Accounting 505 cannot be taken as an elective. Only 6 hours of accounting courses below the 500-level may be taken.

**Admission**

Students who have earned an undergraduate degree in Business Administration with an overall GPA of 2.8 or higher will be considered for acceptance into the fifth year of the Master of Professional Accountancy Program. Admission to the graduate phase of the MPA program is based upon the combination of an applicant's academic record and score on the Graduate Management Admission Test. Students may enter the program any quarter, and each individual has an advisor to help plan the program.

In addition to meeting the core business courses, the applicant must have satisfactorily completed the following minimum accounting courses:

Accounting Systems .....	3
Intermediate Accounting * .....	9
Income Tax .....	3
Managerial Cost Accounting.....	3
Advanced Accounting.....	3
Auditing.....	3
<hr/>	
	24

\*Or an equivalent intermediate sequence which is six hours at some universities.

In addition to the above requirements, the applicant must have completed a basic calculus course, a statistics course, and an advanced English writing course. Applicants with deficiencies in these areas must take either Math 222 or Quantitative Analysis 390, Quantitative Analysis 233, and either English 303 or 336.

For information concerning admission to the MPA program, contact the director of the School of Professional Accountancy or the Associate Dean for Graduate Affairs and Academic Research, College of Administration and Business, Louisiana Tech University, Ruston, LA 71272; send an e-mail to [cabgrad@cab.latech.edu](mailto:cabgrad@cab.latech.edu); or refer to our website: <http://www.cab.latech.edu/>.

**Doctor of Business Administration (D.B.A.)**

The Doctor of Business Administration degree is a professional degree at the highest level of formal study in business administration. It is intended to develop the breadth and depth of comprehension, the command of research methodology, and the understanding of related disciplines required for careers in university teaching and research, or for high-level professional and administrative positions in business, government, education, or other organizations. The Doctor of

Business Administration degree is a broad, interdisciplinary degree. The D.B.A. candidate must expect to exhibit or develop a high level of competence and skills of individual inquiry and original research which characterize the doctorate. The student will work under the close supervision of a major professor and an Advisory Committee.

### **Field and Related Requirements**

The Doctor of Business Administration degree program requires knowledge to be developed in three subject areas chosen from the following fields: Accounting, Computer Information Systems, Economics, Finance, Management, Marketing, and Quantitative Analysis. Also, research support courses in mathematics, statistics, computer languages, and other selected fields will be chosen according to the major field of the student. Regardless of the specific fields used by the D.B.A. student, the student must normally show credit for at least one course for graduate credit in each of these: Accounting, Computer Information Systems, Economics (normally two courses), Finance, Management (normally Business Policy), Marketing, Research Methods, and Statistics. There is no requirement of a foreign language for the D.B.A. degree.

### **Admission to the D.B.A. Program**

To qualify to be considered for admission to the D.B.A. program, applicants must meet the graduate admissions requirements of the Graduate School and the College and the doctoral admissions requirements of the Graduate School. If these requirements have been or can be met, the application will be reviewed by a doctoral admissions committee to determine personal characteristics, research interest and capability, motivation and perseverance, and promise of success in high-level advanced study. The following requirements must also be met by applicants:

The academic record and score on the Graduate Management Admissions Test (GMAT) must demonstrate sufficient promise to indicate that they are qualified to perform successfully in the D.B.A. program. More emphasis will be placed on applicants' graduate record if they have already earned the master's degree than on their undergraduate record.

Steps in applying for admission and in obtaining an admission decision are as follows:

1. Arrange to take the Graduate Management Admission Test by calling (800) GMAT - NOW. Request that your test score be sent to the Associate Dean for Graduate Affairs and Academic Research, College of Administration and Business (code 6372), Louisiana Tech University, Ruston, LA 71272.
2. For an application for admission form write to The Graduate School, Louisiana Tech University, P. O. Box 7923, Ruston, LA 71272, or download an application from our website: <http://www.cab.latech.edu/>. Return the completed application to this same address.
3. Request all colleges and universities attended at any time in the past to send official transcripts to the address in No. 2 above.
4. Request three persons who know your qualifications for doctoral study to serve as references. Ask them to mail their letters of recommendation directly to the Associate Dean for Graduate Affairs and Academic Research, College of Administration and Business, Louisiana Tech University, Ruston, LA 71272. These letters should be submitted before or by the time the application is made. Also, the applicant should send a current resume to the same address.
5. When the above four steps have been completed, an invitation may be extended to come to the campus for an oral admissions examination. The admission decision will

be made by the D.B.A. Admissions Committee after this examination, but all admissions credentials will be used in making this decision.

### **Hours Required and General Examinations for the D.B.A. Program**

A minimum of 60 semester credit hours of graduate course work is required beyond the bachelor's degree exclusive of credit for dissertation research and Current Topics in Research Seminar. The Advisory Committee will decide the number of credit hours which students must take to provide the necessary strength in their fields.

Upon completion of the course requirements, written and oral comprehensive examinations are administered. After all examinations are completed, the student will be admitted to candidacy status. After the completion of the dissertation, there will be administered a final oral examination in defense of the dissertation. All examinations are to be taken on the main campus under the direct supervision of appropriate faculty members.

### **Dissertation**

Credit and progress in the dissertation will be provided by registration in Administration and Business 690. A final oral examination will be administered after the dissertation is completed.

### **Residence Requirements**

A minimum of three consecutive quarters and a minimum of 24 semester credits, exclusive of research and dissertation credit, beyond the masters degree or its equivalent are required to be taken on the Louisiana Tech campus. The student's Advisory Committee may specify additional residential course work beyond the minimum of 24 credit hours.

### **Candidacy and Time Limitation**

After the student has successfully passed the general examination, the student will be admitted to candidacy. The student must complete the dissertation and pass the final oral examination (defense of the dissertation) within a maximum of three calendar years after being admitted to candidacy, with up to two one-year extensions. Students must request an extension of the three-year time limit in writing. Such a request must include a discussion of the reasons for the extension, a description of the work completed to date, and a projected timetable for completion of the dissertation. The final oral examination (defense of the dissertation) must be completed successfully at least two weeks prior to the date the degree is expected to be received.

### **Additional Information**

Request additional information from Associate Dean for Graduate Affairs and Academic Research, College of Administration and Business, P. O. Box 10318, Louisiana Tech University, Ruston, Louisiana 71272. Telephone (318) 257-4528; send an E-mail to [cabgrad@cab.latech.edu](mailto:cabgrad@cab.latech.edu); or refer to our web site: <http://www.cab.latech.edu/>.

# Graduate Programs

## College of Applied and Natural Sciences

### Officers of Instruction

Dean

Shirley P. Reagan

Assoc. Dean for Graduate Studies & Research

William J. Campbell,

Assoc. Dean for Undergraduate Studies

James D. Liberatos

School of Biological Sciences

David Mills, Interim Director

School of Human Ecology

Janet F. Pope, Director

### Address

More information about the College of Applied & Natural Sciences can be obtained by writing and/or visiting the College's web site:

College of Applied & Natural Sciences

P.O. Box 10197

Louisiana Tech University

Ruston, LA 71272

(318) 257-4287

<http://www.ans.latech.edu>

The demand for individuals with education beyond the bachelor's degree in applied and natural sciences disciplines is continually increasing in many areas of public service and private industry. Graduate programs to encourage and to nurture expanded investigation in specific areas of interest have developed to meet this demand.

### Financial Aid

A limited number of university and externally funded graduate assistantships are available on a competitive basis. Students holding assistantships have out-of-state fees waived. Thesis students are encouraged and assisted by individual advisors, to apply for external research funds. Graduate students may also be employed as student workers. The Merle Burke, Willie Fletcher, and Jeanne Mack Gilley scholarships, described in the Applied and Natural Sciences general section of the Bulletin, are available for Human Ecology students. For additional information concerning financial aid, contact either the Director of the School of Biological Sciences or the Director of the School of Human Ecology.

### School of Biological Sciences

The School of Biological Sciences offers programs of study leading to the Master of Science in Biology with concentrations in the areas of cell and molecular biology, environmental biology, and organismal biology. Students can pursue a thesis option (30 semester hours) or a non-thesis option (36 semester hours).

### Admission

In addition to meeting the general admission requirements of the Graduate School, applicants must have earned a bachelor's degree with not less than 30 semester hours in biology, chemistry through organic with laboratories, and mathematics through college algebra. Applicants must also submit their scores on the General Tests of the Graduate Record Examination (GRE). Students may be admitted to the graduate program in Biological Sciences with either unconditional or conditional

admission status. For unconditional admission, an applicant must possess a minimum GPA of 3.0 and a score of at least 1800 calculated using the formula:  $(\text{GPA} \times 200) + (\text{Verbal GRE} + \text{Quantitative GRE} + \text{Analytical GRE}) = 1800$ . For conditional admission, an applicant must possess a minimum GPA of 2.5, and a score of at least 1600 calculated using the formula:  $(\text{GPA} \times 200) + (\text{Verbal GRE} + \text{Quantitative GRE} + \text{Analytical GRE}) = 1600$ .

Each graduate student will select a Graduate Advisory Committee for the purpose of counseling and guidance through the graduate program. Undergraduate course work submitted must be evaluated for acceptance by the student's Graduate Advisory Committee. Graduate students who have not completed the minimum background for their chosen concentration are expected to satisfy these deficiencies in the initial stage of their graduate program.

### Program of Study

#### Thesis Plan

The program of study for the degree of Master of Science in Biology in the Thesis Option consists of a minimum of 30 semester hours of graduate credit of which at least 15 hours must be taken in 500-level courses. Required courses include Research Methods in Biological Sciences (BISC 502), Biological Sciences Seminar (BISC 509), Current Topics in Biological Sciences (BISC 535), 9 semester hours of electives in the concentration area, 6 semester hours of general electives, and 3 semester hours of statistics. A maximum of six semester hours of credit for Biological Sciences Special Problems (BISC 530) combined with Biological Sciences Internship (BISC 540 and BISC 541) can be used toward the thesis degree. Enrollment in BISC 551 is required each quarter the student is using university resources (faculty time, laboratories, computing facilities, etc.) for thesis work. A maximum of six semester hours of BISC 551 is granted as partial fulfillment of the degree plan. The student will pursue original research in the student's specialized field of interest, supervised by a thesis advisor and approved by the student's Graduate Advisory Committee. Completion of the Thesis Option includes an oral defense of the thesis and oral examination, conducted by the student's Graduate Advisory Committee.

#### Non-Thesis Plan

The program of study for the degree of Master of Science in Biology in the Non-Thesis Option consists of a minimum of 36 semester hours of graduate credit of which at least 18 hours must be taken in 500-level courses. Required courses include Research Methods in Biological Sciences (BISC 502), Biological Sciences Seminar (BISC 509), Applied Biological Sciences Research (BISC 517), Current Topics in Biological Sciences (BISC 535), 12 semester hours of electives in the concentration area, 12 semester hours of general electives, and 3 semester hours of statistics. No more than six semester hours of credit for Biological Sciences Special Problems (BISC 530) combined with Biological Sciences Internship (BISC 540 and BISC 541) can be used toward a graduate degree. Non-thesis graduate students are required to pass comprehensive written and oral examinations conducted by the student's Graduate Advisory Committee.

## Research Activities

Faculty members conduct a wide range of research that may serve as the basis for student theses and independent study projects. Students interested in pursuing research at the graduate level are encouraged to contact the appropriate graduate faculty members, the Director of the School of Biological Sciences, or the Associate Dean for Graduate Studies and Research. Information describing faculty research areas is available directly from the faculty, from the College of Applied & Natural Sciences, or online at [www.ans.latech.edu](http://www.ans.latech.edu), the College web site.

## School of Human Ecology

The School of Human Ecology has been given the authority to grant Master of Science degrees in Family and Consumer Sciences and Nutrition and Dietetics. The Master of Science in Nutrition and Dietetics is awarded only to individuals who have met the requirements to take the examination to be a Registered Dietitian. Within these degrees, the student should select an area of concentration. The areas that have been defined include the following:

### Family and Consumer Sciences (M.S.)

Early Childhood Administration Concentration  
Early Childhood Education Concentration  
Family & Consumer Sciences Education Concentration  
Family & Child Development Concentration  
Human Ecology Concentration

### Nutrition and Dietetics (M.S.)

Clinical Dietetics Concentration  
Community Dietetics Concentration

### Dietetic Internship

The Dietetic Internship is a four-quarter program providing the performance requirements to take the registered dietitian examination. Graduates of an approved didactic program may apply for admission to the dietetic internship.

The program is implemented through facilities in Shreveport, Ruston/Monroe, and Alexandria. Students are assigned to facilities in one city to minimize the amount of travel required.

The dietetic internship students enroll in Graduate School and receive both undergraduate and graduate credit while completing the program. Students are required to enroll in seven hours of graduate credit during the Summer Quarter and four hours of graduate course work during fall, Winter, and Spring. Students are encouraged to complete the Master of Science degree although receipt of the Dietetic Internship verification statement does not require completion of the M.S. degree.

### Accreditation

Graduate programs support undergraduate degree Programs in human ecology education which are included in the University accreditation by the National Council for Accreditation of Teacher Education and approved for certification by the Louisiana State Department of Education. The human ecology teacher preparation programs are maintained through the joint activities of the faculty of the School of Human Ecology and the Louisiana Tech University Teacher Education Council.

The School of Human Ecology is an official member of the AAFCS Higher Education Unit. The undergraduate programs are accredited by the Council for Accreditation of the American Association of Family and Consumer Sciences and approved by the American Dietetic Association.

The Dietetic Internship is accredited by the Commission on Accreditation/Approval for Dietetic Education of the American Dietetic Association (216 West Jackson Boulevard, Chicago, IL

60606), a specialized accrediting body recognized by the Commission on Recognition of Postsecondary Accreditation and the United States Department of Education.

### Admission

In addition to the general admission requirements for the Graduate School, an applicant must have a bachelor's degree from an accredited college or university with a major in human ecology or in a related field. The undergraduate grade point average and Graduate Record Examination scores are used to make admission decisions. For more information, contact the Associate Dean for Graduate Studies and Research in the College of Applied and Natural Sciences.

Students whose performance in oral and written communication is unacceptable may be asked to complete courses to remedy the deficiency. In addition, at the discretion of a student's Advisory Committee, the student may be required to enroll for additional human ecology courses where deficiencies exist.

### Requirements for Graduation for the Master of Science Degree in the School of Human Ecology

1. a. Thirty-six semester hours (non-Thesis), or  
b. thirty semester hours which include six hours of credit in Human Ecology 551, Research and Thesis.
2. A grade point average of 'B' on all graduate work pursued.
3. A minimum of one-half of the hours in courses given exclusively for graduate credit.
4. Credit in Human Ecology 504, Methodology in Human Ecology Research; Human Ecology 546, Microcomputer Applications; and Statistics 402, Introduction to Statistical Analysis.
5. Completion of a thesis or multi-quarter independent study.

With the guidance of the Advisory Committee, each student will develop an individualized plan of study according to the selected area of study. Recommended courses are listed in the Graduate Student Handbook for the School of Human Ecology. Students should contact the Office of the Associate Dean for Graduate Studies and Research in the College of Applied and Natural Sciences for information about the Handbook.

### Research Activities

Faculty in the School of Human Ecology are involved in numerous areas of research which may serve as the foundation for graduate students' theses and independent studies. Current major areas in Family and Consumer Sciences relate to young and older adults (e.g., close relationships, abstinence education for teenagers, intergenerational mentoring), children (e.g. child care availability, infant and toddler development, children's dietary intake and body images, preschool education methodology and teaching strategies, and developmentally appropriate practice), and shopping behaviors (e.g., the older shopper, behavior related to dress and image, and fashion cycles). Nutrition and Dietetics includes nutritional and dietary assessment (e.g., dietary fat intake, calcium intake, fruit and vegetable intake, use of dietary supplements, risk factors for cardiovascular and osteoporosis diseases, and effects of size acceptance and body image perception on food intake), life cycle effects (e.g., maternal and child nutrition, and geriatric nutrition), food service management (e.g., environmental issues, financial, and employee productivity), and education (e.g., dietetic, and education factors that influence dietary intake).

# Graduate Programs

## College of Education

### Officers of Instruction

Dean

Jo Ann Dauzat

Assoc. Dean, Graduate Studies, Research, & Development

Dale D. Johnson

Assoc. Dean, Undergraduate Studies & Director,

Professional Laboratory Experiences

Carolyn F. Talton

Head, Curriculum, Instruction, & Leadership

David E. Gullatt

Head, Health & Physical Education

Billy J. Talton

Interim Head, Psychology & Behavioral Sciences

Tony Young

### Mission

The mission of the College of Education is three-fold:

- to provide high quality educational experiences for current and prospective professionals from baccalaureate through doctoral levels;
- to enhance and extend the knowledge bases undergirding professional programs through research and other scholarly activities;
- to deliver professional services to the various business, civic, and educational communities through collaborative endeavors.

The mission is fostered through the following goals of the College of Education.

1. Continuously refine curricula and instructional procedures ensuring the best research, theory, and professional practice in all programs.
2. Provide clinical and laboratory experiences enabling program graduates to function proficiently in diverse professional and cultural settings.
3. Enable program graduates to serve as change agents through implementation of innovative ideas, strategies, research, and technology.
4. Provide personal and professional development opportunities for students and faculty.
5. Encourage research and development initiatives designed to extend knowledge and solve problems in appropriate human service fields.
6. Promote faculty and student leadership in organizational service, publications, research, and other scholarly endeavors.
7. Design and deliver needs-based programs and services with appropriate constituencies.
8. Implement, evaluate, and refine plans to recruit and retain diverse faculty and student body.

### Accreditation

The College of Education, one of five colleges of Louisiana Tech University approved by the University of Louisiana System, is accredited by the Southern Association of Colleges and Schools. As an individual unit, it is a member of the American Association of Colleges for Teacher Education and of the American Association of Business Teachers. Degree programs offered by the College of Education at the

undergraduate and graduate levels are accredited by the National Council for the Accreditation of Teacher Education.

### Division of Graduate Studies

The Division of Graduate Studies is administered by the Associate Dean, Education Graduate Committee, Graduate Faculty, Department Heads, and the Dean of the College. The purpose of the Graduate Studies Division is to encourage excellence in teaching, research, and service for the College of Education faculty and to administer all graduate programs offered by the College of Education.

The Education Graduate Committee consists of three Graduate Faculty appointed by the Dean of the College from the departments of Curriculum, Instruction, and Leadership; Psychology and Behavioral Sciences; Health and Physical Education; and one graduate student. Actions of the Education Graduate Committee are subject to approval of the Dean of the College and, when appropriate, the Teacher Education Council, the University Graduate Council, and the Dean of the Graduate School.

The Associate Dean administers the graduate programs in accordance with approved procedures. The Education Graduate Committee, chaired by the Associate Dean, establishes and reviews admission/retention policies, acts on new program or course proposals, and reviews appeals for readmission.

A Review Committee, consisting of all graduate faculty, examines the credentials of graduate faculty applicants for evidence of continued scholarly productivity according to published criteria. Recommendations for membership on the graduate faculty are then made to the Dean of the College of Education and the Dean of the Graduate School.

### Degrees Conferred

The College of Education offers programs leading to the Master of Arts, the Master of Science, the Master of Education, the Doctor of Education, and the Doctor of Philosophy degrees.

### The Master's Degree Programs

Master's degree programs are offered in the Departments of Psychology and Behavioral Sciences, Health and Physical Education, and Curriculum, Instruction, and Leadership.

The Psychology and Behavioral Sciences Department offers the Master of Arts degree in Educational Psychology, Counseling and Guidance, and Industrial/Organizational Psychology.

The Health and Physical Education Department offers the Master of Science degree in Health and Physical Education. Candidates may select one of the following concentrations: Teacher Preparation, Adapted Physical Education, Exercise Science, and Sports Science. The programs in Teacher Preparation and Adapted Physical Education require teacher certification for admission to these programs.

The Curriculum, Instruction, and Leadership Department offers the Master of Science in Curriculum and Instruction and the Master of Education program in both elementary and secondary education. The Master of Education leads to teacher certification while the Master of Science Degree is intended for already certified teachers.

The Master of Education (M.Ed.) Fifth-Year Program is designed for liberal arts and sciences graduates who seek initial certification in a teaching area and a master's degree. Certification areas for the M.Ed. degree include Art Education,

Business Education, Elementary Education, English Education, Foreign Languages Education, Health and Physical Education, Mathematics Education, Music Education, Science Education, Social Studies Education, Speech Education, and Vocational Agriculture Education.

Graduate students in the College of Education, along with graduate students in the other academic colleges, are eligible to compete for University Graduate Assistantship positions. Inquiries concerning these assistantships should be directed to the college Office of Graduate Studies.

### Admission Requirements

In addition to the general admission requirements of the Graduate School, a student seeking a Master of Science degree in any of the teaching areas must hold a teaching certificate for the area. In addition, students seeking the Master of Arts in Educational Psychology and in School Counseling must also hold a teaching certificate. Students desiring to enter a master's program in the College of Education should submit a Graduate Record Examination (GRE-General) score before or at the time of application. For conditional admission, students must have a GPA of 2.25 on all hours pursued or 2.50 on the last 60 hours (excluding the M.Ed. candidates). For unconditional admission, students must have a GPA of 2.50 on all hours pursued or 2.75 on the last 60 hours. Students entering the M.Ed. degree must have a minimum cumulative GPA of a 2.50 and present evidence of satisfactory completion of the PRAXIS Reading, Writing, and General Knowledge Tests.

Following review of the undergraduate GPA, an admissions formula is calculated. The formula is  $GPA \times 200 + GRE V + Q$ . Conditional admission is granted to those who have 1200 points while unconditional admission is granted to those with 1300 points or more. Conditional status is removed upon earning a GPA of 3.0 on nine graduate credits.

New students who have not taken the GRE will be admitted to Graduate School "on condition" if their grade point averages are satisfactory. They must submit acceptable GRE Scores during their first quarter of enrollment or be dropped from graduate status.

A maximum of nine (9) semester hours earned at Louisiana Tech in a non-degree status and prior to admission to the Master's degree program may be included in the 33-36 semester hours of required work.

Please note that graduate credit cannot be awarded for any 300- level courses and only certain 400-level courses are approved to receive graduate credit.

## Department of Curriculum, Instruction, & Leadership

### Master of Science in Curriculum & Instruction

The candidate seeking a Master of Science degree in Curriculum and Instruction will be required to earn a minimum of 36 semester hours which may include 6 hours credit for a thesis. An approved plan of study must be submitted during the first quarter of enrollment.

#### Required core courses for the degree include:

Education 541, Introduction to Graduate Study and Research; Education 572, Education Foundations and Public Policy; Education 521, Assessment of Students and Programs; Education 522, Instructional Theory and Practice; and Education 526, Curriculum Development. The student may choose one of the following: Education 575, Practicum; Education 471, Classroom Management; Education 524, Supervision of Student Teachers; an education elective; or Education 551, Research and Thesis (6 hours).

To complete the 36 hour program, students choose a **cognate** of 15 hours (12 hour **concentration** from a designated area plus a three hour elective) which may lead to an additional area of certification. **Candidates may choose from the areas of adult education, early childhood, computer literacy, reading, middle grades, special education, fifteen hours in a subject area, elementary or secondary principalship, and/or supervisor of instruction.** Additional information regarding the cognate areas may be obtained from the Head of Curriculum, Instruction, and Leadership or from the Director of Graduate Studies.

Advisors will assist candidates in developing a Plan of Study during the first quarter of enrollment. No more than nine hours may be transferred toward this degree with the approval of the advisor, department head, and college Director of Graduate Studies. No deviation can be made from the plan of study without prior permission of the advisor. A comprehensive examination must be passed during the last quarter of enrollment in the student's program.

### Master of Education

**The M.Ed. program in Secondary Education:** requires the successful completion of the following courses (36 semester hours): Education (Content Specific Methods); Education 471, Classroom Management; Education 528, Evaluating Pupil Growth; Education 541, Introduction to Graduate Study & Research; Education 572, Educational Foundations & Public Policy; Education 575, Practicum in Reading; Educational Psychology 511, Advanced Educational Psychology; Psychology 510, Principles of Human Development; three (3) hours content elective; and Education 576, Internship in Education.

**The M.Ed. program in Elementary Education:** requires the successful completion of the following courses (36 semester hours): Education 541, Introduction to Graduate Studies and Research; Education 572, Education Foundations and Public Policy; Education 424, Materials & Methods in Elementary/Middle School Reading; Education 417, Diagnosis & Correction of Reading Difficulties; Education 575, Practicum in Reading Instruction; Education 422, Materials & Methods in Elementary/Middle School Mathematics; Education 423, Materials and Methods in Elementary/Middle School Language Arts; Education 425, Materials & Methods in Elementary/Middle School Science; Education 426, Materials & Methods in Elementary/Middle School Social Studies and Education 576, Internship in Education.

A Master's paper will be guided and approved by the advisor and completed prior to the fourth week of the final quarter. The professional knowledge and area specialty components of the PRAXIS and a comprehensive examination must be successfully completed before the candidate is recommended for the M.Ed. and teacher certification. A professional portfolio must be completed during the internship quarter.

In addition to successfully completing the coursework, the following are graduation requirements:

1. Passing scores on remaining parts of PRAXIS must be on file before graduation. Score requirements are listed by various degrees in the booklet under "Louisiana."
2. Successful completion of the Speech and Hearing Test given by the Tech Speech Department must be recorded.
3. The Master's paper must be signed by the advisor and graduate director by the final quarter.
4.  A comprehensive examination must be passed in the final quarter or in the quarter immediately prior to commencement of the student's Internship

## Department of Health & Physical Education

### Master of Science in Health & Physical Education

The candidate seeking a Master of Science degree in Health and Physical Education will be required to earn 36 semester hours which may include 6 semester hours for a thesis. The program in Health and Physical Education offers opportunities for various career interests providing **concentration areas in teacher preparation, adapted physical education, sports science, and exercise science.** The teacher preparation and adapted physical education concentration areas require a valid teaching certificate in physical education issued by the Louisiana State Department of Education or its equivalent. The sports science and exercise science concentration areas do not require teacher certification for admission to the program.

The **teacher preparation concentration** is designed for individuals interested in teaching physical education at the elementary and/or secondary level. The teacher preparation concentration requires 18 hours in health and physical education classes, 6 hours of health and physical education electives, 6 required hours in professional education, and 6 elective hours in education.

The **adapted physical education concentration** is provided for individuals interested in teaching adapted physical education in a school setting. Twenty-one hours are required in health and physical education, 6 hours are required in professional education, and 9 elective hours may be chosen from related areas within the University. Upon completion of the degree with an Adapted concentration, the candidate will be certified to teach adapted physical education in Louisiana.

The **exercise science concentration** is available for individuals interested in exercise physiology. Eighteen hours of health and physical education classes are required with 6 elective hours in health and physical education, 3 required hours in professional education, and 9 elective hours from related fields from any college within the University.

The **sports science concentration** is provided for people interested in athletic coaching with a focus on the acquisition and performance of psychomotor skills in sports. This concentration requires 18 hours in health and physical education, 6 hours of health and physical education electives, 6 required hours in professional education, and 6 elective hours from related areas within the University.

## Department of Psychology & Behavioral Sciences

### Master of Arts in Counseling & Guidance

The counseling and guidance M.A. program is designed to prepare counselors for counseling and human service positions in educational institutions and other agencies. The program is designed to provide all enrollees with basic preparation in counseling and psychology with various elective options offered to prepare counselors for particular institutional settings, e.g., educational, mental health, and community service agencies.

**Two concentrations are offered in this field: school counseling, and general (community) counseling.** Consistent with state certification requirements, elementary and secondary counseling curricula have been combined into a single school counseling concentration. The school counseling concentration requires 33 semester hours of study including a practicum in a school setting. The general counseling concentration requires completion of a 48-semester hour curriculum (including a practicum and two internship courses.) The school counseling concentration is available on both the main campus and the Barksdale AFB campus. The general counseling concentration is offered on the main campus only. The general counseling concentration prepares students for Licensed Professional Counseling roles; the school counseling concentration for certified school counselor roles and requires a valid teaching certificate for admission. The general counseling program does

not require a permanent teaching certificate for admission. Students should consult their advisors for current degree requirements. Counseling & guidance M.A. general counseling concentration students must submit three letters of reference, a statement of purpose, GRE scores, and transcripts for admission consideration. For more information, contact the Department of Psychology and Behavioral Sciences, P.O. Box 10048, Ruston, LA 71272 or e-mail: [psychology@latech.edu](mailto:psychology@latech.edu).

### Master of Arts in Educational Psychology

The Department of Psychology and Behavioral Sciences offers the M. A. degree in Educational Psychology. **Five areas of concentration are available: Educational Diagnostics, Mild/Moderate, Gifted/Talented, Psychoeducational Research and Evaluation, and Visual Impairments - Orientation & Mobility.** Some of the concentrations require a valid teaching certificate.

For more information on this program, please contact the Department Head, Department of Psychology and Behavioral Sciences, P.O. Box 10048, Ruston, LA 71272 or e-mail to [psychology@latech.edu](mailto:psychology@latech.edu).

**Special Education.** This program has been converted to the M. A. degree in Educational Psychology (see above). For more information, contact the Department of Psychology and Behavioral Sciences, P.O. Box 10048, Ruston, LA 71272 or e-mail: [psychology@latech.edu](mailto:psychology@latech.edu).

**Master of Arts in Industrial/Organizational Psychology.** Persons trained in Industrial/Organizational Psychology frequently find employment in private and public organizations, consulting firms, and government.

The candidate seeking a Master of Arts degree with a major in Industrial/Organizational Psychology must complete a prescribed course of study (see advisor for current degree requirements). Up to 9 semester hours may be taken in management (to be selected from Management 447, 470, 478, or 537; Management 472, 539, 547; Management 571; and Economics 418 or Management 419). This program requires at least 18 hours credit from academic and/or professional courses designed exclusively for graduate credit.

### The Doctor of Philosophy Degree in Counseling Psychology.

The Department of Psychology and Behavioral Sciences offers the Ph.D. degree in counseling psychology. The program is based on the scientist-practitioner model of training which emphasizes the interrelation of psychological theory, research, and practice. Counseling psychology involves the understanding of human behavior in a variety of contexts across the life cycle and implementation of a broad range of interventions designed to facilitate maximal adjustment among those seeking help.

#### Admission

Application for admission requires a completed Graduate School Application form, a minimal composite (verbal + quantitative) Graduate Record Exam Score of 1000, official transcripts of all college or university work, and other requisites as may be specified by the department, such as, but not limited to, interviews and three reference letters or letters of intent, philosophy, and professional goals.

Meeting minimal requirements does not guarantee admission into the program. In addition to demonstrating evidence of academic competence and capability, those persons selected for the program need to possess personal maturity and interpersonal skills, an unusual curiosity about their own and others' functioning, and personal and professional goals that clearly coincide with the aims and interests of the program and its faculty. Admission is highly selective.

### **Degree Requirements**

Students will receive current degree requirements from their advisors. All students complete required course work, counseling practica, a one-year counseling psychology internship, and a dissertation based on original research. The program is a full-time in-residence program normally requiring five calendar years post-bachelor's or four calendar years post-master's to complete.

**Advisory Committee.** At matriculation the student will be appointed a temporary advisor by the department head of Psychology and Behavioral Sciences. By the end of the first quarter of enrollment the student must formally decide upon a permanent advisor and an advisory committee who will assist in creating the plan of study.

**Time Limitation.** The doctoral degree must be completed within 5 consecutive calendar years after passing the comprehensive examination.

**Description of Courses.** Counseling and psychology 500- and 600-level courses are open to graduate students only, with 600-level courses reserved exclusively to doctoral enrollment.

**Transfer Credits.** With the approval of the counseling psychology faculty, the department head of the Psychology and Behavioral Sciences Department, and the college's director of graduate Studies, a maximum of 36 semester hours may be transferred into the program.

**Curriculum.** The counseling psychology Ph.D. program currently requires a minimum of 108 post-baccalaureate semester hours. The curriculum may be obtained from our home page (<http://www.latech.edu/tech/education/phd.html>), or by e-mail ([psychology@latech.edu](mailto:psychology@latech.edu)), or by writing the Department of Psychology and Behavioral Sciences, P.O. Box 10048, Ruston, LA 71272. Completion of a one-year internship and an original dissertation are integral parts of the curriculum.

**Outside Employment.** Because ours is a full-time program, outside employment must be declared and approved prior to undertaking it. Forms are available for this purpose from the department.

## **Louisiana Education Consortium**

**Doctor of Education Degree.** The Doctor of Education degree in Curriculum and Instruction or Educational Leadership is offered through the cooperative efforts of Grambling State University, Louisiana Tech University, and University of Louisiana at Monroe and is coordinated through the Louisiana Education Consortium Governing Board. All consortium institutions offer foundation courses and other graduate courses required in the Ed.D. program in Curriculum and Instruction or Educational Leadership based upon faculty expertise and other institutional resources. The Doctor of Education degree in Curriculum and Instruction and in Educational Leadership is awarded by the institution to which the student has been admitted for doctoral study with course work being completed on all three campuses in order to provide diverse academic experiences. A unique strength of the Louisiana Education Consortium is that the three institutions strategically pool faculty, equipment, and technology.

The programs are designed for K-12 personnel, including teachers and administrators. The primary goal of the doctoral

programs is the preparation of practitioner-scholars for roles in elementary, middle, and secondary school settings.

**Admission Requirements for the Doctor of Education Degree.** Student admission in Regular status to the Doctoral program is based upon the following criteria:

- Applicants must hold a master's degree from a regionally accredited institution in an area related to their proposed program of study.
- Applicants must have a minimum cumulative undergraduate grade point average of at least 2.75 and a minimum cumulative graduate grade point average of at least 3.25.
- Applicants must have completed the Graduate Record Examination (GRE) with a minimum score of 1000 (Verbal and Quantitative) or 1500 (Verbal, Quantitative and Analytical).
- Applicants must have teaching and or administrative experience in a kindergarten, elementary, middle, or secondary school or similar educational setting. A valid teaching certificate or equivalent course work is required for admission.
- Applicants must submit three letters of recommendation from individuals who are familiar with their character, teaching/administrative performance and ability to perform academically on the doctoral level.
- Applicants should complete their admission portfolios by inclusion of a personal resume and samples of their writing, particularly writing that has been published.
- Finalists in the application process may be required to have a personal interview with the doctoral admission committee on the campus from which the student wishes to receive a degree.
- In addition to demonstrating evidence of academic competence and capability, those persons selected each year for this program will be applicants who are already considered leaders in their educative fields and who have clearly articulated their educational commitment to public schools. The application process is competitive.

Any applicant meeting all other requirements for admission except minimum GPA or GRE scores may appeal to the Consortium Governing Board for admission in conditional status. The Board may admit to individual campuses, under these conditions, up to ten percent of the total number of students admitted during any semester/quarter. No student shall be admitted when the student's GRE test performance is in the lowest quartile among students taking the test on the same date.

### **Eligibility to Remain in the Doctor of Education Degree Program.**

Students enrolled in the doctoral program must maintain a minimum grade point average of 3.0 during each term of enrollment. Failure of the student to maintain an overall graduate grade point average of 3.0 or receipt of any grade lower than C or receipt of more than six semester hours of C in graduate course work, will result in termination from the program. The student must successfully complete all course work with a minimum grade point average of 3.25.

A graduate student who is denied admission to or further continuance in the Doctor of Education degree program may appeal for admission or readmission. All appeals must be approved by the appropriate committee on the student's campus of enrollment and by the Consortium Governing Board.

## Program of Study for the Doctor of Education Degree

**Course work.** The approved degree program for each doctoral student must include a minimum of sixty hours beyond the master's degree of which at least one half must be in course work open only to doctoral students. Individuals possessing the Education Specialist Degree in the area in which they are pursuing the doctorate must complete a minimum of 45 additional semester hours of credit for the doctorate.

The consortium program for the Doctor of Education degree consists of the following components:

Education Foundations/Research/Statistics.....	12
Core Courses for Specific Degree.....	18
Cognate.....	9
Elective.....	3
Internship.....	6
Dissertation/Research Design Seminar.....	12
.....	.....
Minimum Total Hours.....	60 semester hours

Initial campus enrollment may not be changed during the student's matriculation in the doctoral program. Each student pursuing the doctorate through the Louisiana Education Consortium will be required to enroll in classes on the campus of each participating institution. A minimum of fifteen semester hours of the minimum sixty hours required for the doctorate must be taken on the campuses of participating institutions other than the host campus. At least two courses must be taken on each campus.

**Preliminary Examination.** Upon completion of a minimum of 15 semester hours and not more than 27 semester hours of doctoral course work, each student will be required to take a preliminary examination. The preliminary examination is designed to measure student competence in 1) educational foundations, 2) research, 3) statistics and 4) general professional knowledge. This common six-hour written examination will be constructed by appropriate consortium faculty. Following the evaluation of the written preliminary examination, a one-hour oral examination may be conducted by the student's advisory committee. Student performance on both components of this examination will form the basis for any revisions of the program of study. Failure to pass this examination after two attempts will result in termination of the student from the program.

**Comprehensive Examination.** The second doctoral examination, the comprehensive examination, is administered upon completion of all program course work. This examination consists of a six-hour written component and a two-hour oral examination. Failure to complete this examination satisfactorily will result in a revision of the program of study and an additional examination. Failure to pass this examination after two attempts will result in termination of the student from the program. After satisfactory completion of the comprehensive examination, the student is admitted to candidacy.

**Internship.** The Louisiana Education Consortium is unique in preparing students to become practitioner-scholars. These individuals will apply the knowledge acquired in program components to practical settings. To achieve this goal, six semester hours of internship will be required. Students are eligible to apply for internship only after successful completion of the comprehensive examination. The internship must be completed at a site other than the student's place of employment. The student's doctoral committee will assist the student in internship placement.

**Dissertation.** In addition to the research requirements associated with each course, all doctoral students are required to complete a dissertation. The dissertation should be directed toward the degree specialization and must include field-based research. Students are encouraged to pursue the identification of a dissertation topic and the review of the literature prior to the comprehensive examination. The dissertation prospectus must be approved by the student's doctoral committee after the comprehensive examination has been successfully completed. Other research requirements, for example, the use of human subjects, must be approved on the campus on which the student is enrolled.

The student will be expected to enroll for a minimum of three semester hours of dissertation credit for each semester/quarter in which the student is working with faculty on the dissertation. The student must be enrolled in a minimum of three semester hours of dissertation credit during the semester/quarter in which the degree is conferred. No fewer than nine semester hours of credit shall be earned for successful completion of the dissertation.

Following completion of the dissertation, the student will be expected to defend this scholarly work during a dissertation defense.

**Doctoral Committee.** The student's doctoral committee shall consist of the major professor and a minimum of three additional faculty. The major professor is the committee chair and must be selected from the institution in which the student is enrolled. Each institution shall have at least one representative on each doctoral committee. Each committee will include a professor from the cognate area. Additional committee members may be added to address specific student program or research needs. The student's doctoral committee is selected by the student, appointed by the appropriate administrator on each campus, and approved by the Consortium Board.

### Residence Requirements for the Doctor of Education Degree

Students pursuing the Doctor of Education degree will be required to spend at least two consecutive semesters/quarters in residence on the campus from which the degree is to be awarded. Students must be enrolled as full-time students during the time in which the residence requirement is being met.

**Transfer of Credit for the Doctor of Education Degree.** A maximum of nine semester hours of graduate credit appropriate to the student's degree program may be transferred from other institutions offering regionally accredited graduate programs if earned in residence at that institution. Students are requested to submit catalog descriptions of courses under consideration. No credits for which a grade of less than B has been earned may be transferred. Neither internship nor dissertation credit may be transferred into consortium programs.

**Time Limit for the Doctor of Education Degree.** All course work, internships, and the dissertation must be completed within a seven-year time period from date of admission to the program. Courses transferred into the doctoral program must also be within the seven-year time limit for completion. Any appeal for extension must be approved by the institution's Graduate Council and the Consortium Governing Board.

**Policies and Procedures.** Policies and procedures for the Louisiana Education Consortium Ed.D. are detailed in the Louisiana Education Consortium Handbook available in Prescott Library and in the Bookstore.

# Graduate Programs

## College of Engineering and Science

### Officers of Instruction

Dean

Leslie K. Guice

Associate Dean, Research and Graduate Studies; Director,  
Institute for Micromanufacturing

Kody Varahramyan

Associate Dean, Undergraduate Studies

James D. Nelson

Biomedical Engineering, Industrial Engineering  
Mechanical Engineering,

Stanley A. Napper, Academic Director

Chemical Engineering, Civil Engineering, Geosciences

Bill B. Elmore, Interim Academic Director

Mathematics and Statistics

E. Eugene Callens, Jr., Academic Director

Electrical Engineering, Electrical Engineering Technology,  
Computer Science

Jenna P. Carapenter, Academic Director

Chemistry, Physics

Balachandran Ramachandran, Academic Director

Chemical Engineering

Bill B. Elmore, Program Chair

Civil Engineering, Construction Engineering Technology

Freddy Roberts, Program Chair

Computer Science

Vir V. Phoha, Program Chair

Electrical Engineering

David H. Cowling, Program Chair

Geosciences

Gary S. Zumwalt, Program Chair

Industrial Engineering

Jun-Ing Ker, Program Chair

Mathematics and Statistics

George Butler, Program Chair

Mechanical Engineering

William M. Jordan, Program Chair

Physics

Lee Sawyer, Program Chair

The College of Engineering and Science offers the Master of Science degree with majors (specializations) available in each of the Engineering and Science programs. An interdisciplinary Doctor of Philosophy degree in Engineering is offered with strong research emphasis. A Doctor of Philosophy degree is offered in the Biomedical Engineering program. The College is also the major participant in the Interdisciplinary Doctor of Philosophy degree in Computational Analysis and Modeling (CAM).

### Financial Assistance

Financial assistance is available to a limited number of qualified graduate students in the College of Engineering and Science. This assistance includes graduate assistantships of \$9,000 at the master's level and from \$12,000 to \$18,000 at the doctoral level. Out-of-state tuition is waived for both types of assistantships. A limited number of fellowships are available to students in the doctoral programs; these fellowships may also include a full tuition waiver.

Also available are research assistantships on funded research contracts sponsored by governmental agencies and private industry. All inquiries concerning financial assistance should be directed to the chair of the program in which the applicant

wishes to major or to the Associate Dean for Graduate Studies. University assistantships are also open to engineering and science graduate students. Inquiries concerning these assistantships should be directed to the Associate Dean for Graduate Studies.

For a student on a full-time (20 hours of work per week) assistantship, the minimum required load is 6 semester hours of graduate credit per quarter and the maximum load allowed is 9 credit hours (these hours must be listed on the student's Plan of Study).

### Research Activities

The College of Engineering and Science is a member of the Engineering Research Council of the American Society for engineering and science education. Engineering research is a very important function of the College which addresses technological advances as well as providing professional development opportunities for the faculty. The purpose of the research division of the College is to encourage, promote, and facilitate the performance of original research by members of the College of Engineering and Science and to expedite the dissemination of the knowledge thus gained. The financial support of research projects is derived from two primary sources: (a) the operating budget of the Division of Engineering and Science Research and (b) sponsorship of a project by an interested outside agency.

The College of Engineering and Science regards original research and scholarly publications as a vital part of engineering and science education. A research thesis is required of all master's students except those approved for non-thesis option, and a dissertation is required of all doctoral students. The student works in concert with his/her advisory committee to plan, execute, and publish this research.

### Submission of Research Proposals

Research proposals for students enrolled in a Master of Science degree program are due during the student's second quarter of enrollment in the given degree program. Research proposals for students enrolled in a doctoral degree program are due during the student's fourth quarter of enrollment in the given degree program. Any student who has not met this condition will not be allowed to register as a graduate student until a research proposal has been submitted.

### Change of Thesis or Dissertation Advisor

After the Advisory Committee is appointed and a Plan of Study has been filed with the Graduate School, the student may appeal for a change of advisor only under extreme circumstances. A written request for a change of advisor must be submitted to the Associate Dean for Graduate Studies of the College. This must also include a description of the circumstances leading to the request and an explanation of why the student believes this is the only course of action remaining to be explored. The Associate Dean may charge a team of graduate faculty members to investigate the matter and submit a report. The Associate Dean will make a recommendation to the Dean of the College who will make a recommendation to the Dean of Graduate School. The final decision on the matter rests with the Dean of Graduate School. If the appointment of a new advisor is appropriate, a new thesis/dissertation topic may also have to be adopted.

## The Master of Science Degree Programs

**Thesis Option.** In order to pursue the Master of Science, a student must be admitted as a graduate student in one of the programs of engineering and science. In addition to any required remedial course work not taken for graduate credit, the student will be required to complete a minimum of 30 semester hours for graduate credit, of which a maximum of 6 hours will be earned in research and thesis. A minimum of 15 hours must be earned in courses open only to graduate students.

**Non-Thesis Option.** The thesis requirement meets the needs of most master's students in the College of Engineering and Science; however, non-thesis options are also available to those students who elect to take additional course work in lieu of writing a thesis, subject to the approval of the student's graduate advisory committee. In these cases, a minimum of 36 semester hours of graduate course work will be required, of which 3 semester hours shall involve a practicum on an advanced topic approved by the student's advisory committee. By University requirements, a minimum of 18 of these hours must be earned in courses open only to graduate students. The student must indicate his/her preference for the non-thesis option during the first quarter of graduate enrollment when his/her Plan of Study is submitted.

In computer science a thesis student must complete 30 semester hours, including three core courses, two two-course sequences, a 500-level elective, and 6 semester hours of thesis. Non-thesis students must complete 36 semester hours, including three core courses, three two-course sequences, two 500-level electives, and 3 semester hours of practicum. There will be a comprehensive examination of course work after the first year of graduate study is completed.

**General Admissions Consideration.** The Dean of the College of Engineering and Science, or a person designated by the Dean, reserves the right to be more restrictive on the admission or other requirements than those stated under the Graduate School section of this Bulletin.

### Admission to the Masters Program

For students desiring to major in biomedical, chemical, civil, electrical, industrial or mechanical engineering, a baccalaureate degree with a major in the same engineering discipline from an ABET accredited program is the best preparation. Students who do not possess this background are not discouraged from applying, but, in general, must expect some non-graduate credit background work in order to pursue their graduate program effectively and successfully. Since the master's degree is generally accepted as a higher level of intellectual accomplishment than the baccalaureate degree, the student must expect his/her program to be structured accordingly. The student will be required to remove any deficiencies in mathematics, science, engineering, and communication. In particular, students with a baccalaureate in mathematics or the physical sciences should expect remedial courses stressing engineering analysis, synthesis, and design.

Students entering the master's program in computer science will be expected to have a background equivalent to the bachelor's program in computer science at Louisiana Tech. Any core computer science courses in the B. S. program at Tech will be considered deficiency courses for master's students if they have not taken equivalent courses in their bachelor's programs. A student may challenge a deficiency course by successfully completing a comprehensive examination and, as appropriate, programming projects. Graduate students will be required to maintain a 3.0 grade point average in all deficiency courses;

failure to do so will result in transfer to post-baccalaureate status.

In addition to the general University admission requirements, a student must also meet the following requirements for admission to a Master of Science program in the College of Engineering and Science. These are minimum requirements and meeting them does not guarantee admission:

1. All students applying for any graduate program in the College of Engineering and Science are required to submit a GRE score at the time of application.
2. If a student has a GRE score of 1070 or higher (Verbal + Quantitative) or an overall GPA of 3.00 or higher and a GPA of 3.00 or higher on the last 60 hours of undergraduate course work, he/she may be considered for unconditional admission to the Master of Science program.
3. If a student has an overall GPA between 2.50 and 3.00 or a GPA between 2.50 and 3.00 on the last 60 hours of undergraduate course work, he/she may be considered for conditional admission to the Master of Science program.
4. Conditional and unconditional admission are explained under the Graduate School section of this Bulletin.

### Individual Requirements

The exercise of these options and the choice of courses will be proposed as a plan of study by the student and his/her Advisory Committee subject to review and approval (in order) by the major program chair, the Associate Dean for Research and Graduate Studies, the Dean of the College of Engineering and Science, and the Dean of the Graduate School. The transfer of graduate credit from another graduate institution, graduate credit by examination, graduate credit as a graduating senior, or credit earned other than as a regularly enrolled graduate student in the College of Engineering and Science at Louisiana Tech must meet all University standards and is also subject to approval as part of the plan of study. Courses taken for graduate credit while the student is registered in the non-degree unclassified category will not be applied to a degree program without approval by the student's advisory committee and the Associate Dean for Research and Graduate Studies.

Individual programs may, upon approval by the Dean of the College of Engineering and Science, impose additional requirements, such as written comprehensive exams.

### Master of Science with a Major in Chemistry

Research specialties of the chemistry program are as follows: the mechanisms of organic reactions, theoretical chemistry, synthesis and properties of novel inorganic compounds, environmental problems, separation techniques and trace analysis, conformational analysis by vibrational spectroscopy, enzyme kinetics, single crystal x-ray structure determination, and NMR spectroscopy.

In addition to the Graduate School admission requirements, an applicant must have earned college credit for courses as follows: one year of general chemistry, quantitative analysis, organic chemistry, physical chemistry, and physics; mathematics through calculus, both differential and integral; and inorganic chemistry.

The candidate for the master's degree must complete a total of 30 semester hours of graduate credit in chemistry, or 24 hours of chemistry and 6 hours in a related field, consisting of courses numbered 400 (for graduates and advanced undergraduates) and 500 (for graduate students only).

Nine of the required 30 hours must be earned by taking for credit courses numbered 500 (for graduates only).

In addition to the 9-hour requirement just stated, 6 hours of the total must be earned by taking for credit Chemistry 551,

Research and Thesis, and by completing an acceptable thesis. A written examination will be taken in the major field and in other fields if the student's advisory committee requires it.

A graduate committee, appointed for each student, shall review the qualifications of the candidate and set forth the courses required for the Master of Science degree. This committee may also require deficiency courses to be taken without graduate credit upon the basis of each student's transcript.

### **Master of Science with a Major in Mathematics & Statistics**

The mathematics and statistics program offers in depth studies in algebra, analysis, differential equations, probability and statistics, applied mathematics, and computational mathematics.

In addition to the University requirements for admission, the applicant must have a bachelor's degree with the equivalent of an undergraduate major in mathematics of not less than 30 semester hours. By the end of the first quarter of enrollment, the student is to choose one area of interest. An advisory committee that reflects the student's major area of interest will then be appointed.

Each candidate for the M.S. degree will be required to have credit in the following Louisiana Tech University courses or their equivalent at another college or university: Math 405, 414, 480, and Statistics 405.

In addition, each candidate for the M.S. degree must satisfy the conditions in one of the following two plans:

**Plan A:** Thirty semester hours of graduate credit must be earned. A minimum of 24 semester hours, 6 of which are to be for an acceptable thesis, must be earned in the Mathematics and Statistics Program. At least 9 semester hours, excluding thesis credit, must be in 500-level courses in the Mathematics and Statistics Program. Up to 6 semester hours of graduate courses may be chosen from a related field if approved by the advisory committee.

**Plan B:** Thirty-six semester hours of graduate credit must be earned. A minimum of 27 semester hours, 3 of which are to be for an acceptable project, must be in the Mathematics and Statistics Program. At least 9 hours, excluding credit for a project, must be in 500-level courses in the Mathematics and Statistics Program. Up to 6 semester hours may be chosen from a related field if approved by the advisory committee. The project will be a study in some area of mathematics or statistics not normally covered in a regularly scheduled course, or it will be a solution to a problem that requires mathematics or statistics at the graduate level. A project must be approved by the student's advisory committee before credit is received.

### **Master of Science with a Major in Physics**

The physics program offers instruction and opportunities for research in the areas of solid state physics, high energy physics, computational physics, and quantum gravity. The completion of the master's program will prepare the student for further work toward the doctorate degree as well as for employment in government and industry.

In addition to the admission requirements of the Graduate School, the applicant must have a bachelor's degree with the equivalent of an undergraduate major in physics.

The minimum residence requirement for the master's degree with a major in physics is three quarters.

Each candidate for the M.S. degree must satisfy the conditions in one of the following two plans:

**Plan A:** The candidate for the master's degree must complete a minimum of 24 semester hours of graduate credit in physics plus Math 502 and Math 544, or other courses acceptable to his/her thesis committee. Six of the required 30 hours must be earned by taking

Physics 551, Research and Thesis, and by completing an acceptable master's thesis.

During the first quarter of residence, the student must take a preliminary oral examination over undergraduate physics. In addition, the student must pass an oral examination on his/her thesis.

**Plan B:** The candidate must earn thirty-six hours in this non-thesis plan as approved by his/her advisory committee. At least 27 hours must be in 500-level courses in the physics program and nine hours in mathematics or other courses acceptable to the student's advisory committee. During the first quarter of residence, the student must take a preliminary oral examination over undergraduate physics. In addition, the student must pass an oral examination over his/her graduate work.

### **Master of Science in Engineering Management**

The engineering management program is a practice-oriented (non-thesis) masters degree and focuses on managing technology and engineering functions. The program includes 33 semester hours of coursework.

### **Master of Science in Manufacturing Systems Engineering**

An interdisciplinary degree in Manufacturing Systems Engineering is administered by the College of Engineering and Science. Students can pursue the degree on either a thesis or non-thesis basis. Courses are taken from three primary areas: manufacturing process control, integrated design and manufacturing, and integration of manufacturing operations. Additionally, courses can be taken from three supplemental areas: business, mathematics and statistics, and computer science.

## **The Doctoral Degree Programs**

The Louisiana Tech University College of Engineering & Science offers doctoral programs in four areas. An interdisciplinary Doctor of Philosophy degree in Engineering is offered with a major emphasis on research. A Doctor of Philosophy degree is offered in the Biomedical Engineering program. The College is also the major participant in the Interdisciplinary Doctor of Philosophy degree in Computational Analysis and Modeling (CAM) and is a joint partner in the combined Ph.D. Biomedical Engineering/M.D. Program with Louisiana State University Medical Center – Shreveport.

### **Admission to the Doctoral Programs**

Prior to entering the Doctor of Philosophy program in Engineering a student must have a degree in an acceptable engineering or related curriculum.

For students desiring to major in Biomedical Engineering, a baccalaureate degree with a major in an engineering discipline from an ABET-accredited institution is the best preparation. Students who do not possess this background are not discouraged from applying, but, in general, must expect some amount of undergraduate remedial courses stressing engineering analysis and synthesis to prepare them for pursuit of their graduate program effectively and successfully.

Students entering the Doctor of Philosophy in Engineering program or the Doctor of Philosophy program in Biomedical Engineering will be required to remove any deficiencies in mathematics, science, engineering, and communication.

Applicants are required to submit GRE scores and the names and complete address of three academic and professional references who will be contacted directly by the College of Engineering and Science. A GRE score of 1170 or higher (Verbal + Quantitative) or a graduate GPA of 3.25 or higher, if the applicant has an M. S. degree, is required. A GRE score of 1270 or higher (Verbal + Quantitative) is required if the

applicant is entering the program with a B.S. degree only. These are minimum requirements and do not guarantee admission to a doctoral program.

Pending receipt of the GRE scores and letters of reference, the applicant may be considered for admission as a non-degree, unclassified student. The applicant will be granted either an unconditional admission or will be rejected after review of all application materials.

#### **Description of Courses.**

The 400-level courses that have been approved for graduate credit are for undergraduate and graduate registration; the 500- and 600-level courses are for graduate student registration only. Credit for Research and Dissertation is listed as Engineering 651 rather than as a program listing.

### **The Doctor of Philosophy Degree Program in Engineering**

The Ph.D. in Engineering is an interdisciplinary degree with a strong research emphasis. The program prepares candidates for both academic and industry careers. Interdisciplinary graduate degrees have been advocated in recent reports by the National Academy of Engineering and the National Research Council, among others. This degree focuses on the technical strengths and research focal areas of the Institute for Micromanufacturing and the Trenchless Technology Center. **Students must choose research projects for their dissertation in thematic areas closely aligned with these Centers.**

Students in this program are expected to complete 66 graduate hours (including dissertation) beyond the baccalaureate degree. These hours will be approved as part of a comprehensive plan of study by the student's Ph.D. Advisory Committee. Eighteen credit hours of core courses are required of all students in the program. These courses are intended to provide a strong fundamental set of research capabilities and to help individual students bridge the gap to other disciplines preparatory not only to dissertation work but also to their future career. The remaining courses are chosen in relation to the thematic areas, which currently are microelectronics, micromanufacturing, and materials and construction systems.

An acceptable dissertation will be required of all students in this program. A student must register for a minimum of 18 credit hours in Research & Dissertation (Engr 651). The topic will be selected in accordance with and approved by the student's advisory committee and the Associate Dean for Research & Graduate Studies. The advisory committee will review the dissertation and examine the student on its contents before certifying satisfactory completion.

The schedule of exams consists of a comprehensive examination at or near the completion of formal coursework and a defense of the dissertation. The comprehensive examination consists of written and oral parts organized by the Ph.D. in Engineering Steering Committee. At least 60% of those faculty serving on the Advisory Committee must recommend that the student has satisfactorily passed any of the examinations. None of the examinations may be taken more than three times.

The minimum residence requirement for the doctoral degree is 8 quarters beyond the bachelor's degree. The student is required to spend at least 3 quarters beyond the first year of graduate study in continuous residence. The transfer of course work from a recognized graduate school carries with it the transfer of residence credit, but a minimum of 24 semester hours of graduate credit beyond the first year of graduate study must be earned in residence at Louisiana Tech University. Ph.D. students are required to complete the doctoral program in its entirety within 3 years after successful completion of the comprehensive examination.

### **The Doctor of Philosophy Degree Program in Computational Analysis and Modeling**

The College of Engineering and Science is the major participant in the interdisciplinary Ph.D. in the CAM program. See the CAM section in this Bulletin for the full program description.

### **The Doctor of Philosophy Degree Program in Biomedical Engineering**

The Doctor of Philosophy program in Biomedical Engineering is designed to

- strengthen the foundation in engineering, mathematics, and biomedical engineering principles by advanced courses in these areas;
- provide depth in a specific area of concentration within biomedical engineering;
- provide the skills and experience necessary to fully utilize the resources available in the field, and;
- prepare graduates to conduct independent study and research.

In order to pursue the degree, a student must be accepted as a major in the Biomedical Engineering program. The program is a balance of intensive and extensive formal course work as a foundation, a sequence of examinations, and the production of a dissertation.

The program consists of a minimum of 48 hours credit in formal course work, exclusive of research and dissertation credit, beyond the baccalaureate. Choice of acceptable graduate level courses, including choice and composition of major and minor areas, will be established by the advisory committee in concert with the doctoral student, subject to approval as part of the plan of study.

The typical program includes a minimum of 30 hours of major course work (this may cross departmental lines) and 12 hours in mathematics. Individual interests, need, and the demands of the engineering profession, both present and anticipated future, will guide these decisions with flexibility as the keynote. A minimum of 15 hours must be earned in Engineering 651, Research and Dissertation. No foreign language is required for the Ph.D. in Biomedical Engineering. English is the language of communication and both oral and written skills are important.

The schedule of examinations consists of a comprehensive examination at or near the completion of formal course work and a defense of the dissertation. At least 60% of all those serving on the advisory committee must recommend that the student has satisfactorily passed any of the examinations. None of the examinations may be taken more than three times.

### **The Combined M.D./Ph.D. Degree Program Louisiana State University Medical Center-Shreveport and Louisiana Tech University**

#### **Purpose**

The combined M.D./PhD program is designed to promote the education of physician/scientists by allowing qualified students to progress concurrently through the School of Medicine at Louisiana State University-Shreveport and the Graduate School at Louisiana Tech University in a more efficient and productive manner than could be otherwise accomplished. The program is administrative in nature and does not alter the degree requirements, curricula, courses, or admission requirements at either school.

**Application**

Students who have not matriculated in either school shall make separate application to the School of Medicine at Louisiana State University-Shreveport and the Graduate School at Louisiana Tech University, and to the M.D./Ph.D. Program through the M.D./Ph.D. Program Supervisory Committee. Students must be accepted by each of the schools and by the M.D./Ph.D. Program Supervisory Committee.

Students already enrolled in the School of Medicine may apply for admission into the program if they have not started Clinical Diagnosis 221-222 by application to the Graduate School at Louisiana Tech University and to the M.D./Ph.D. Program Supervisory Committee. After acceptance into the Graduate School and with the approval of the M.D./Ph.D. Program Supervisory Committee, the student may enroll in the program.

Students will meet the admission and program requirements of each school and will maintain the level of good standing requirement by each school to continue in the program.

Special circumstances and exceptions may be considered by the M.D./Ph.D. Supervisory Committee. Exceptions may be implemented if approved by the M.D./Ph.D. Supervisory Committee and the Deans of the respective schools.

# Graduate Programs

## College of Liberal Arts

### Officers of Instruction

Dean

Edward C. Jacobs

Associate Dean

Dennis E. Minor

School of Architecture

Henry Stout, Director

School of Art

Dean C. Dablow, Director

School of Literature & Language

Carole S. Tabor, Director

Department of History

Stephen Webre, Head

School of Performing Arts

Kenneth Robbins, Director

Department of Speech

J. Clarice Dans, Head

- Studio (2D or 3D) - School of Art
- Graphic Design - School of Art
- Interior Design - School of Architecture
- Photography - School of Art

Though distinct in character and professional goals, these programs complement and enrich one another. The programs are competitive, and interested students are encouraged to visit the campus to discuss their educational/career plans with the faculty.

In addition to meeting the general admission requirements for the Graduate School, an applicant must submit a slide portfolio that demonstrates a sufficient undergraduate art background. A Bachelor of Fine Arts for the School of Art or the Bachelor of Interior Design for the School of Architecture are the best preparation. However, students who do not possess these backgrounds are not discouraged from applying, but in general must expect some undergraduate background work or additional graduate level work in order to pursue their graduate program effectively.

The candidate for the Master of Fine Arts must complete a minimum of 60 graduate credit hours. Additional course work beyond the 60-hour minimum may be required. A graduate committee, appointed for each student, shall review the qualifications of the student and set forth the courses required for the degree. A maximum of 21 credit hours is eligible for transfer from another institution, contingent upon graduate committee review and approval. A candidate's status is subject to review at any time. At the conclusion of graduate study, the candidate is expected to present a one-person exhibition, or similar demonstration of his/her accomplishments, which is accompanied by a written and visual record.

A limited number of graduate assistantships are available. Graduate Assistants receive a stipend for the academic year (three quarters) and a waiver of out-of-state tuition, where applicable. The deadline for assistantship applications is April 1.

Although the University accepts applications until 3 weeks prior to registration, this deadline, for a number of reasons, is not adequate for application to the MFA Program. The deadlines for the MFA program are as follows:

- Fall Quarter Admission: May 1
- Winter Quarter Admission: 8 weeks prior to Winter Quarter Registration
- Spring Quarter Admission: 8 weeks prior to Spring Quarter Registration
- Department Assistantships: April 1
- University Assistantships : February 1

Requests to begin the MFA Program in the Summer Quarter are not allowed, because adequate evaluation and administration of new graduate students are not possible during this time. The University Assistantships listed are awarded by the University's Graduate Directors to applicants based on grade-point average and GRE scores.

The School of Art occupied new facilities in the Spring of 1997. The 40,000 sq. ft. main structure houses a 3,000 sq. ft. gallery, a 100-seat auditorium, and a state-of-the-art computer lab. Other facilities include a 10,000 sq. ft. Sculpture, woodshop, printmaking, and ceramic lab. Each graduate student is assigned to one of 48 private studios in another facility. Our facilities are supplemented by visiting lecturers, film presentation, and workshops.

### Admission

GRE scores are one factor used in evaluating applications for graduate studies in the College of Liberal Arts. Only after the GRE scores are received will the applicant receive the final review for admission to the relevant graduate program. As noted in the general admissions requirements for the Graduate School, students applying for graduate programs in the College of Liberal Arts must submit GRE scores at least four weeks prior to registration. In exceptional circumstances, that deadline may be extended but only until the next testing period for the GRE.

### Graduate Programs

The College of Liberal Arts offers the degree of Master of Arts in the fields of English, History, Speech, and Speech-Language Pathology & Audiology. The degree of Master of Fine Arts is offered in Art and in Interior Design.

### Thesis

Academic units in the College of Liberal Arts differ in their thesis requirements. Some units do not require a thesis while other units have both thesis and non-thesis tracks. The thesis may be an academic thesis or combined academic/creative thesis, depending on the academic unit. Students should check with their academic unit about thesis options and guidelines for those theses, in addition to checking with the Graduate School about general thesis guidelines.

### Division of Research

Louisiana Tech University is committed to quality in teaching, in research and creative activity, and in public service. The Division of Research in the College of Liberal Arts serves to promote research and creative activity by faculty and students. The main sources of research funds are federal and state agencies, private foundations, and industry.

### School of Art & School of Architecture

The Master of Fine Arts degree is offered by the School of Architecture and the School of Art and is designed for those interested in the creative aspects of the arts. The Masters of Fine Arts degree is the recognized terminal degree for the visual artist. Work toward the Master of Fine Arts degree may be undertaken in four areas:

The School of Art Bachelor and Master of Fine Arts degrees are accredited by the National Association of Schools of Art and Design. The Master of Fine Arts in Interior Design degree is also accredited by the National Association of Schools of Art and Design.

### Department of English

The graduate program in English is designed to be thorough, comprehensive, and culturally broad. Graduates of the program typically go on to doctoral programs in English or pursue teaching careers at the high school or junior college level. Those students choosing the technical writing concentration often enter business and government. The Department of English maintains a collaborative electronic-learning agreement with University of Louisiana at Monroe to exchange graduate-level video courses point-to-point. The Department also maintains a cooperative agreement with Louisiana State University at Shreveport to provide graduate-level video courses. Details of these agreements are available from the department office.

The English Department offers a limited number of teaching assistantships awarded on a competitive basis.

#### Master of Arts with a Major in English

In addition to the Graduate School admission requirements, an applicant must have a bachelor's degree from an accredited college. For unconditional admission, a minimum of 24 hours must be in English. At least 12 of these 24 hours must be junior- or senior- level course work. An applicant who does not meet these additional requirements may be admitted conditionally and required to take additional course work.

Candidates for the degree of Master of Arts with a major in English will follow one of two plans.

- Under **Plan A (Thesis)**, the student must complete a minimum of 33 hours of graduate credit in English, consisting of courses numbered 400 (for graduates and advanced undergraduates) and 500 (for graduate students only). Six of the 33 hours must be earned in Liberal Arts 551, Research and Thesis. In addition to the 6 thesis hours of Liberal Arts 551, the 33 hours must include at least three other 500-level courses exclusively for graduate students, one of which must be English 591. Finally, although a comprehensive examination is not given under Plan A, the student must pass a one-hour oral defense of the thesis.
- Under **Plan B (Non-Thesis)**, the student must complete a total of 33 hours of graduate credit and pass a comprehensive written examination based on the course work taken for the degree. At least 5 of the required 11 courses must be at the 500 level (for graduate students only), one of which must be English 591. The remaining 6 courses may be taken either at the 500 level (for graduate students only) or at the 400 level (for advanced undergraduates and graduate students).

All English courses numbered 400 or above in the current Bulletin, unless otherwise designated, are acceptable for graduate credit toward the degree of Master of Arts with a major in English.

### Department of History

The graduate program in history is designed to train postgraduate students in the knowledge and skills necessary to the professional practice of history as preparation for further study (especially the Ph.D. in history), for employment or advancement in fields in which such skills are desirable, and for personal cultural enrichment. Combined with a teacher

certification program, the MA in history is excellent preparation for teaching social studies at the secondary level.

The Department of History maintains a collaborative agreement with the University of Louisiana at Monroe (ULM) and a cooperative agreement with Louisiana State University at Shreveport. Details of these agreements are available from the department office.

Graduate assistantships are available to qualified students on a competitive basis. Other forms of competitive assistance include the McGinty Graduate Fellowship, the Louise B. Johnson Graduate Scholarship, and the Morgan D. Peoples Graduate Scholarship.

#### Master of Arts with a Major in History

In addition to the admissions requirements of the Graduate School, the applicant must have the equivalent of an undergraduate minor, or 21 semester hours, in history.

A student wishing to pursue the Master of Arts in history will elect a major specialty concentration, which will consist of at least 12 semester hours of thematically related course work chosen in consultation with the graduate advisor. **Major Specialty Concentrations** currently offered are:

- Southern History
- History of Culture and Ideas
- History of American Foreign Policy

The major specialty concentrations in Southern history and the history of culture and ideas are offered under the collaborative agreement with the University of Louisiana at Monroe (ULM). Some courses related to these concentrations are taught by ULM faculty members, who are also available to direct independent study experiences and to serve on thesis and examination committees.

Individualized concentrations may be permitted with the approval of the graduate advisor and the graduate coordinating committee.

The degree of Master of Arts in History may be completed under either Plan A (Thesis) or Plan B (Non-Thesis):

- **Plan A (Thesis):** the thesis plan is recommended for the student who anticipates continuing graduate study beyond the Master of Arts degree. It may also be appropriate to the professional or personal goals of other students. The student must complete 30 semester hours of graduate credit, 6 hours of which will be given for successful completion of a thesis. The thesis course is Liberal Arts 551, Thesis Writing and Research (3 semester hours credit), which may be repeated once for credit. At least 12 of the remaining 24 hours must be completed in 500-level courses open only to graduate students. History 505 is required of all students.
- **Plan B (Non-Thesis):** This plan is intended primarily for the student who does not anticipate pursuing doctoral-level work in history following completion of the Master of Arts degree. The student will not prepare a thesis, but must pass a written examination in his or her area of major specialty concentration, or other approved area of course work specialization. Also, the student must submit at least two substantial research papers prepared in 500-level courses for departmental approval as evidence of research and writing skills attained. The student must complete 33 hours of graduate credit in history, at least 18 of which must be completed in 500-level courses open only to graduate students. History 505 is required of all students.

Every candidate for the Master of Arts degree in History must pass an oral examination covering his or her entire program of study.

All history courses numbered 400 or above in the current Bulletin of Louisiana Tech University, unless otherwise designated, are acceptable for credit toward the degree of Master of Arts with a major in history. Six hours of approved course work may be taken outside the discipline of history.

## Department of Speech

Graduate programs in the Department of Speech provide training and experience in Speech Communication, Speech-Language Pathology and Audiology, and Theatre Arts. The student may choose a program of study which allows concentration in any one of these areas. All graduate students in Speech-Language Pathology and Audiology and Speech Communication must demonstrate acceptable proficiency in research and writing. Such proficiency must be demonstrated in Speech 500: Introduction to Research. Speech courses numbered 400 or above in the current Bulletin of Louisiana Tech University may be considered for credit toward the degree of Master of Arts with a major in Speech.

### **Master of Arts in Speech: General Degree Requirements**

Applicants who do not have an undergraduate major in one of the areas of Speech noted above are expected to satisfy any course deficiencies in the initial stages of their graduate program.

The graduate student in Speech must complete 36 semester credit hours. The student will follow one of two plans of study. Under **Plan A**, he/she must complete a minimum of 30 hours of graduate credit in Speech, or 24 hours in Speech, and 6 hours in a related field, which are approved by his/her major professor and by the Head of the Department of Speech. Twelve of the required 30 hours must be in courses offered exclusively for graduate students (500 series), not including thesis courses. In addition, six hours of the total must be earned by taking for credit Liberal Arts 551: Research and Thesis and by completing an acceptable thesis. A written and an oral examination on all course work and the thesis are required.

The requirements under **Plan B** are the same as those under Plan A, except that the student will not write a thesis and will complete a minimum of 36 hours of graduate credit.

Graduate credit, not to exceed six hours, may be earned in courses in fields related to Speech. Such credit must be approved by the student's advisor and the Head of the Department of Speech.

All graduate students in Speech-Language Pathology & Audiology, as well as Speech Communication, must demonstrate acceptable proficiency in research and reporting. Such proficiency must be demonstrated in Speech 500: Introduction to Research. All speech courses numbered 400 or above in the Bulletin catalog of Louisiana Tech are acceptable for credit toward the degree of Master of Arts with a major in speech.

### **Master of Arts in Speech with a Concentration in Speech Communication**

The graduate program in Speech Communication offers students advanced study and scholarly research in applied organizational communication. With a goal of professional communication competency, the program allows the student to focus on the study of information flow within an organization and the impact of communication on individuals entering, working in, and exiting organizations. The combination of communication theory and applied course work is central to the graduate education experience. All graduate students are required to complete practicum course work. Practica in speech communication are viewed as educational tools that provide

meaningful professional experience related to the study of communication in organizational settings. Students are encouraged to schedule their practica in organizations and/or areas in which they would one day like to work (e.g., Business and industry, higher education). The academic course work and practica are sequenced so that a student can normally fulfill the requirements for the Master of Arts in Speech Communication in two years. Speech communication course work is offered in organizational communication, research methods, communication theory, and special communication topics related to faculty and students' interests. Graduates can expect to work in a wide range of professions including human resources development, corporate communication, training and development, public relations, communication consulting, education, and other related fields.

All prospective graduate students must meet the general admissions requirements of the Graduate School and those who do not have an undergraduate major in Speech Communication are expected to satisfy any course deficiencies in the initial stages of their graduate program. Graduate students in the speech communication emphasis will complete one of the two degree plans discussed above in "Master of Arts in Speech: General Requirements."

### **Master of Arts in Speech-Language Pathology & Audiology**

The graduate programs in Speech-Language Pathology & Audiology are accredited by the Council on Academic Accreditation (CAA) of the American Speech-Language-Hearing Association (ASHA). The purpose of accreditation is three-fold:

1. to promote excellence in the preparation of graduates to enter the professions of Speech-Language Pathology and Audiology through the development and implementation of standards of educational quality;
2. to protect and inform the public by recognizing programs that meet or exceed the educational standards; and
3. to encourage graduate programs to monitor and enhance the efficacy of their educational activities by means of continuous self-study and improvement. Accreditation is limited to those graduate educational programs that prepare persons for entry into the professions.

Therefore, in addition to meeting the general admission requirements of the Graduate School, students seeking admission to the graduate program in Speech-Language Pathology & Audiology must be recommended for admission to the graduate program by the graduate admissions committee of the Department of Speech. The committee evaluates each applicant based on grade point averages, Graduate Record Examination (GRE) scores, letters of intent, and three letters of recommendation (at least one of which must come from a faculty member who taught the applicant in a communicative disorders course). The departmental graduate admissions committee may ask applicants to schedule personal interviews. Only those students who can demonstrate strong potential for completing all degree requirements are accepted into the program.

The application deadline for admission in any academic year is March 15. The graduate admissions committee will review only those applications that are completed by March 15. The committee's review process is completed by April 15, and applicants are notified accordingly. Students may enter the graduate program only in the Fall Quarter of each academic year.

The minimum number of graduate semester hours required for the Master's degree in Speech-Language Pathology & Audiology is 36. However, students majoring in Speech-

Language Pathology & Audiology often have to take 40 or more semester hours in order to complete clinical certification requirements. The student with an undergraduate degree in speech-language-hearing typically requires two years of full-time study (including at least one summer) to complete all requirements for the degree. A student who does not hold an undergraduate degree in speech-language-hearing is expected to satisfy any course deficiencies in the initial stages of the graduate program. This is necessary in order for the student to meet the academic and clinical practicum certification requirements of the ASHA. All courses necessary to satisfy any deficiencies are offered in the Speech Department. Graduate students in Speech-Language Pathology & Audiology will complete one of the two degree plans discussed above in "Master of Arts in Speech: General Degree Requirements."

The academic course work and clinical practicum experiences are sequenced so that the student meets the academic and clinical training requirements for the ASHA Certificate of Clinical Competence (CCC) in either audiology or speech-language pathology prior to graduation. All students in speech-language pathology & audiology are required to meet the academic and clinical experience requirements set by the ASHA for the Certificate of Clinical Competence in Speech-Language Pathology or Audiology prior to completion of the master's degree. Speech-language pathology course work is offered in adult and child language disorders, neurological disorders, phonology, stuttering, cleft palate, diagnostic procedures, speech science, voice disorders, and research methodology. Audiology course work is offered in hearing disorders, differential, pediatric, industrial audiology, instrumentation and calibration, central auditory processing disorders, physiological tests of auditory function, hearing aids, aural rehabilitation, and research methodology. In addition to clinical practicum experiences obtained through the Louisiana Tech Speech and Hearing Center, located on campus, graduate students obtain practicum experiences in a variety of off-campus clinical sites. This is necessary in order for students to earn the clinical clock hours required for certification. Students should be aware that it is necessary that they be assigned to affiliated off-campus clinical training sites in order for them to earn the clinical clock hours required for certification. Each student will be responsible for transportation and his/her own expenses when assigned to one of these sites.

#### **Master of Arts in Speech with a Concentration in Theatre**

The Graduate Theatre Program (administered in the School of the Performing Arts) requires that students take 18 credit hours in a general core including Speech/Theatre 515, 518, 531, 532, and 536; 12 hours in an area of theatre concentration; and 6 hours in elective or related field courses, approved by the director of the School of the Performing Arts.

Admission to the program includes formal application to the Louisiana Tech University Graduate School and campus audition/interview. (A video audition or interview off campus can be substituted). Students pursuing the Master of Arts with theatre emphasis will follow either Plan A or Plan B as outlined above in "Master of Arts in Speech: General Degree Requirements."