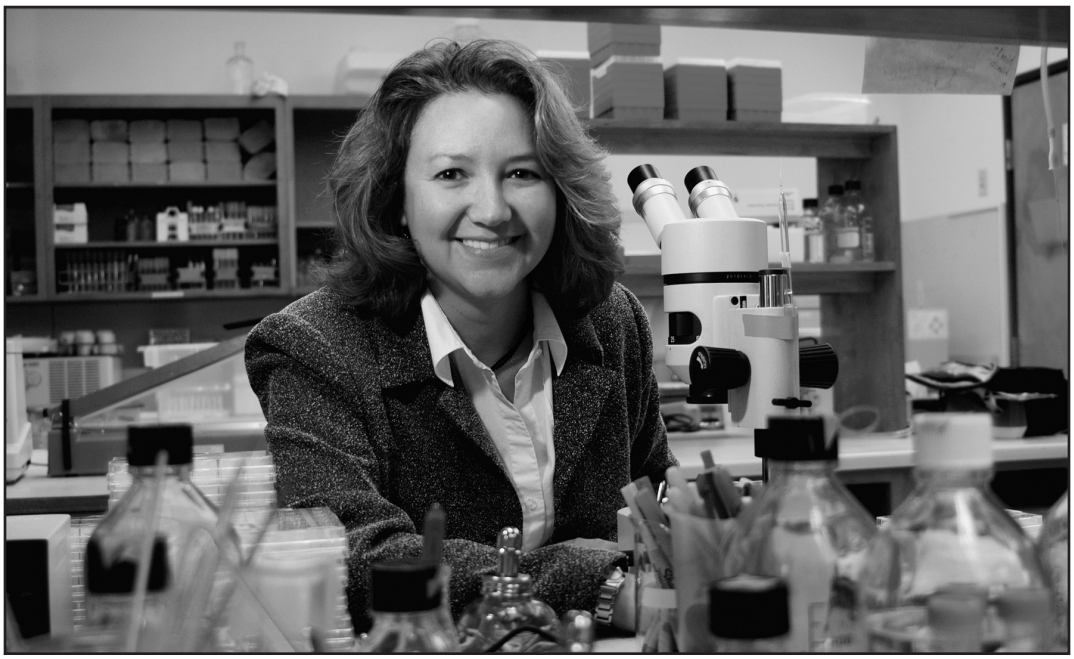

College of Arts and Sciences

Main Office
General Academic Building, 210
P.O. Box 305189
Denton, TX 76203-5189
(940) 565-2497

Web site: *www.cas.unt.edu*

Warren Burggren, Dean

Jean B. Schaake, Associate Dean
Kathryn Gould Cullivan, Associate Dean
Michael Monticino, Associate Dean

Programs of Study

The College of Arts and Sciences, through its disciplines of humanities and arts, social sciences and sciences, offers course work leading to the following degrees:

- Master of Arts,
- Master of Fine Arts,
- Master of Journalism,
- Master of Science,
- Doctor of Audiology, and
- Doctor of Philosophy degrees.

Master's degrees are offered by all academic departments in the college. Among the more specialized master's programs are the master's degree with a major in English as a second language offered by the Department of English and a master's degree in speech pathology offered by the Department of Speech and Hearing Sciences.

Doctoral programs in the college typically reflect the areas of academic specialization or focus of the various departments (see individual departmental descriptions in this catalog for specific information). All areas offer challenging programs that provide students with the opportunity to become experts in their chosen fields. A major emphasis in the college is to train graduate students in the fundamentals of research and to prepare them, especially on the doctoral level, to be critical thinkers who can advance human knowledge through research.

The college is composed of 17 academic departments.

- Biological Sciences
- Chemistry
- Communication Studies
- Dance and Theatre
- Economics
- English
- Foreign Languages and Literatures
- Geography
- History
- Journalism
- Mathematics
- Philosophy and Religion Studies
- Physics
- Political Science

- Psychology
- Radio, Television and Film
- Speech and Hearing Sciences

Research

Innovative research in the arts, humanities and social sciences is under way in such areas as technical writing, regional history, health psychology and applied communication skills. Research programs in the natural sciences, mathematics and technologies cover the fields of biology, chemistry, physics, mathematics and environmental science. Research initiatives within these fields include molecular biology and biotechnology, neuroscience, applied geography, environmental toxicology, artificial intelligence, environmental health, image processing, organometallic chemistry, laser and accelerator-based physics, materials characterization, and applications of geographic information systems.

Advising

For general information, contact the Toulouse School of Graduate Studies. For specific requirements for graduate degrees, contact the appropriate department chair or graduate adviser.

Department of Biological Sciences

Main Departmental Office
Biology Building, 210
P.O. Box 305220
Denton, TX 76203-5220
(940) 565-2011
Fax: (940) 565-3821

Web site: *www.biol.unt.edu*

Art J. Goven, Chair

Graduate Faculty: Atkinson, Ayre, Beitinger, Benjamin, Burggren, Chapman, Dickson, Dickstein, Dzialowski, Fitzpatrick, Fuchs, Goven, Gross, Huggett, Jagadeeswaran, Kennedy, Kunz, LaPoint, O'Donovan, Padilla, Pirtle, Roberts, Root, Schafer, Schwark, Sinclair, Smith, Stevens, Tam, Thompson, Venables, Waller, Zimmerman.

Mission

The Department of Biological Sciences provides contemporary education of the highest quality to students pursuing graduate degrees in four degree programs: biology, biochemistry, molecular biology and environmental science. Research, strong professor-student mentoring, high-quality instruction and professional community service are the foundation of our mission.

Research

The cornerstone of our graduate programs is the creation of new knowledge through research. We offer students the opportunity to conduct research that leads to theses and dissertations in aquatic biology, aquatic toxicology, biochemistry, cell and molecular biology, ecology, environmental science, forensic biology, genetics, limnology, microbiology, neurobiology, physiology and plant sciences. Our research is supported through numerous public- and private-sector sources.

Department resources for research and graduate training occupy more than 200,000 square feet in the Biology Building, the Science Research Building and the Environmental Education, Science and Technology Building. Greenhouses and an aquatic field station are also available for research.

Degree Programs in Biological Sciences

The department offers graduate programs leading to the following degrees:

- Master of Arts (non-thesis or research problems in lieu of thesis), and
- Master of Science, both with a major in biology;
- Master of Science with a major in biochemistry;
- Master of Science with a major in environmental science;
- Master of Arts, and
- Master of Science, both with a major in molecular biology;
- Doctor of Philosophy with a major in biology;
- Doctor of Philosophy with a major in biochemistry;
- Doctor of Philosophy with a major in environmental science; and
- Doctor of Philosophy with a major in molecular biology, offered as part of the Federation of North Texas Area Universities.

Concentrations at the master's and doctoral level are available in ecology, microbiology and plant science.

The department offers research programs leading to the degrees listed above. Each MS requires a scholarly thesis based on original research by the student. The PhD represents attainment of the highest level of scholarship and achievement in the creation of new knowledge through independent research that culminates in a dissertation of scientific merit. The candidate is expected to have published or have accepted for publication at least

one original research article in a refereed scientific journal prior to graduation.

The department offers a non-thesis option in the following degree programs: MS in biology (Teaching in the Life Sciences); MS (course work only) in environmental science; MA (course work only) in biology; MA (problems in lieu of thesis) in biology; MA (course work only) in molecular biology; and MA (problems in lieu of thesis) in molecular biology.

Application and Admission to the Programs

Biology, Biochemistry, Molecular Biology and Environmental Science Programs

1. Application materials and information about our faculty and programs may be obtained by contacting the graduate advising secretary or coordinator of graduate programs in biology, biochemistry and molecular biology at (940) 565-3627, the environmental science program at (940) 565-3599, or from our web site (*www.biol.unt.edu*). Prospective applicants meeting our admission criteria are encouraged to become familiar with the research and degree programs within the department and to seek opportunities by contacting individual faculty members or the coordinator of graduate programs in biology, biochemistry, molecular biology and environmental science.

2. Applicants must first apply and be admitted to the Toulouse School of Graduate Studies to be considered for admission to a degree program in biology, biochemistry, molecular biology or environmental science. Applicants must also submit the following directly to the department:

   a. **departmental application form**;

   b. **letter of intent**, including the specific program and degree sought (MA, MS or PhD); faculty member contacted as prospective professor/adviser; professional goals and objectives; the reason for choosing UNT, the Department of Biological Sciences and the specific area of interest (biology, biochemistry, molecular biology or environmental science); and

   c. **three form letters of recommendation** from former professors if a recent graduate. One letter may be from an employer if employed for more than one year since graduation.

3. Completed applications for programs in biology, biochemistry and molecular biology meeting departmental acceptance criteria are reviewed by the faculty. Applications to the environmental science program are reviewed for acceptance by the environmental science graduate admissions committee. Only applicants selected by a faculty member who agrees to act as the student's major professor, i.e. adviser, are eligible for admission to a graduate program in biology, biochemistry or molecular biology, and for the PhD in environmental science. Master's students in the environmental science program may select a major professor, i.e. adviser, after admission.

4. **Application deadlines**: for financial support purposes completed applications must be received in the department on or before the following dates. We encourage applications at least three months prior to anticipated enrollment.

Fall term/semester	July 1
Spring term/semester	November 1
Summer term/semester	May 1

5. Departmental acceptance criteria.

   a. **Master's Degree (MA/MS):**

   - Unconditional admission to the Robert B. Toulouse School of Graduate Studies.
   - Complete application.
   - A letter of intent to the department, including the specific program and degree sought (MA, MS or PhD); faculty member contacts as prospective professor/adviser; professional goals and objectives; the reason for choosing UNT, the Department of Biological Sciences and the specific area of interest (biology, biochemistry, molecular biology or environmental science).
   - Three form letters of recommendation to the department, from former professors if a recent graduate. One letter may be from an employer if employed for more than one year since graduation.
   - Undergraduate GPA greater than or equal to 3.0 overall or greater than or equal to 3.2 in the last 60 hours.
   - Submission of GRE scores (verbal, quantitative, and analytical writing sections) is required. The program views high GRE scores as positive indicators of potential success; however, low GRE scores need not exclude a candidate who demonstrates positive indicators in other areas.
   - Completion of the Graduate Preparation Course (GPC) offered by the Intensive English Language Institute may be substituted for the verbal section only of the GRE. Applicants using the GPC in lieu of the verbal section of the GRE may be required to take the GRE in order to meet requirements for other sections of the examination.
   - The appropriate GRE subject test is also required for diagnostic purposes, not admission. In addition, the Medical College Admission Test (MCAT) may also be considered at the discretion of the department.

- Bachelor's degree with 24 hours, 12 of which are advanced, in a life science or appropriate related science is required for programs in biology, biochemistry and molecular biology.
- For the environmental science program, the bachelor's degree must include at least 6 credit hours of a life science (3 of which must be ecology), 8 credit hours of chemistry (must be courses with laboratories) and mathematics through calculus.
- A score on the Test of English as a Foreign Language (TOEFL) that meets or exceeds the International Admissions Office requirements for international students whose native language is not English.
- Agreement by a faculty member to serve as the applicant's major professor, i.e. adviser, is required for programs in biology, biochemistry and molecular biology, but not the environmental science program.

Provisional admission of applicants not meeting all of the criteria, except for the requirement for a major professor, may be considered at the discretion of the department. However, such students are advised to explore the Graduate School's non-degree (GNDE) program until satisfying departmental criteria. Provisionally accepted students must satisfy all admission provisions, including deficiency courses, within the time designated by the department at the time of admission or they will be dropped from the program.

b. **Doctoral Degree (PhD):**

- Undergraduate GPA greater than or equal to 3.0 overall and greater than or equal to 3.2 in the last 60 hours.
- GPA greater than or equal to 3.4 overall for any prior graduate work.
- Complete application.
- A letter of intent to the department, including the specific program; faculty member contacts as prospective professor/adviser; professional goals and objectives; the reason for choosing UNT, the Department of Biological Sciences and the specific area of interest (biology, biochemistry, molecular biology, or environmental science).
- Three form letters of recommendation to the department, from former professors if a recent graduate. One letter may be from an employer if employed for more than one year since graduation.
- Submission of GRE scores (verbal, quantitative, and analytical writing sections) is required. The program views high GRE scores as positive indicators of potential success; however, low GRE scores need not exclude a candidate who demonstrates positive indicators in other areas.
- Completion of the Graduate Preparation Course (GPC) offered by the Intensive English Language Institute may be substituted for the verbal section only of the GRE. Applicants using the GPC in lieu of the verbal section of the GRE may be required to take the GRE in order to meet requirements for other sections of the examination.
- The appropriate GRE subject test is also required for diagnostic purposes, not admission. In addition, the Medical College Admission Test (MCAT) may also be considered at the discretion of the department.
- A score on the Test of English as a Foreign Language (TOEFL) that meets or exceeds the International Admissions Office requirements for international students whose native language is not English.
- Bachelor's degree with 24 hours in a life science or appropriate related science, 12 of which are advanced; a master's degree in a life science with a research-based thesis is desirable for programs in biology, biochemistry and molecular biology.
- For the environmental science program the bachelor's degree must be in an appropriate field related to environmental science, with course work in a life science, chemistry and mathematics. Master's program must include a thesis appropriate to environmental science.
- Agreement by a faculty member to serve as the applicant's major professor, i.e. adviser, is required for all programs.

There is no provisional admission to the PhD program.

Complete applications for programs in biology, biochemistry and molecular biology meeting departmental acceptance criteria are made available for review by the faculty of the Department of Biological Sciences. Applications to the environmental science program are reviewed by the Environmental Science Graduate Admissions Committee. Only applicants selected by a faculty member who agrees to act as the student's major professor, i.e. adviser, are eligible for admission to a graduate program in biology, biochemistry or molecular biology, and for the PhD in environmental science. Students may be admitted to the environmental science master's program before selecting a major professor/adviser.

Degree Programs

Biology Program

The biology program provides students the option of selecting a research track leading to the Master of Science (MS) or Doctor of Philosophy (PhD) in biology, or a non-research track leading to the Master of Arts (MA) in biology. Students interested in obtaining both a master's degree and certification to teach life sciences at the secondary level may select the non-research Master of Science in biology: teaching in the life sciences. Students pursuing a research degree have the opportunity to conduct research leading to a thesis or dissertation in a variety of specializations, including aquatic biology, aquatic toxicology, ecology, forensic biology, genetics, immunology, limnology, microbiology, neurobiology, physiology and plant biology. Visit *www.biol.unt.edu* for research interests of the faculty. Information on degree requirements follows the program descriptions.

Degrees in Biology

- **Master of Science (MS) in Biology** is a 30-hour research degree that requires 24 hours of formal course work, special problems and seminars at the 5000 and 6000 levels, plus a 6-hour thesis.
- **Master of Science (MS) in Biology (Teaching in the Life Sciences)** is a 36-hour non-thesis degree for students who have a BA or BS in a life science and wish initial teacher certification for teaching the life sciences at the secondary level. The degree requires 18 hours in biology (BIOL 5260, 5830 and 6150, plus 9 elective graduate hours in biology) and 18 hours in secondary education (EDSE 5002, 5004, 5005, 5105, 5115 and 5470). Admission to secondary education courses requires the student to meet all College of Education requirements. Students completing this non-thesis MS are not eligible for the PhD program in the Department of Biological Sciences.
- **Master of Arts (MA) in Biology** is a 36-hour non-thesis degree with two options: (1) 30 hours of organized course work at the 5000 and 6000 levels and a 6-hour problems in lieu of thesis; or (2) 36 hours of formal course work at the 5000 and 6000 levels. Students completing the non-thesis MA at UNT are not eligible for the PhD program in the Department of Biological Sciences. The MA has a foreign language requirement.
- **Doctor of Philosophy (PhD) in Biology** is a scholarly research program of 90 hours at the 5000 and 6000 levels beyond the bachelor's degree or 60 hours beyond the master's degree, including a 12-hour dissertation.

Biochemistry Program

Research Faculty: Ayre, Benjamin, Chapman, Dickstein, Jagadeeswaran, Kunz, O'Donovan, Padilla, Pirtle, Root, Smith.

Faculty research interests in biochemistry reflect the broad nature of this discipline, including microbial and plant metabolism, regulation of prokaryotic and eukaryotic gene expression and protein-protein interactions. A specially tailored degree plan will be determined in consultation with the student's major adviser and graduate committee members. Research laboratories are equipped with state-of-the-art instrumentation, and several courses focus on contemporary technical approaches in biochemistry and molecular biology. Specialized instrumentation assists in the analyses of protein/nucleic acid structure and function, molecular imaging, metabolite identification, functional genomics and gene discovery. Visit *www.biol.unt.edu* for more information on the research interests of the biochemistry program faculty. Information on degree requirements follows the program descriptions.

Degrees in Biochemistry

- **Master of Science (MS) in Biochemistry** is a 30-hour research degree that requires 24 hours of formal course work including a minimum of three biochemistry core courses* (with a minimum grade of B) beyond BIOC 5540 and 5550, special problems, and seminars at the 5000 and 6000 levels, plus a 6-hour thesis. Supporting elective courses may be in biology, chemistry, computer science, mathematics or physics.
- **Doctor of Philosophy (PhD) in Biochemistry** is a research program of 90 hours at the 5000 and 6000 levels beyond the bachelor's degree or 60 hours beyond the master's degree, including a 12-hour dissertation. A minimum of four biochemistry core courses* beyond BIOC 5540 and 5550 with a minimum grade of B are required. Supporting elective courses may be in biology, chemistry, computer science, mathematics or physics.

***Biochemistry Graduate Core Courses:** BIOC 5540 and 5550, or the equivalents, are prerequisites for the core courses. Three of the following are required for the MS and four for the PhD: BIOC 5340 or 6600 (only one may count as a core course), 6610, 6620, 6630, 6640 and 6650. In exceptional cases the substitution of a comparable course may be made for one core course.

Molecular Biology Program

The molecular biology program leading to the PhD degree is offered through the Federation of North Texas Area Universities to students enrolled at UNT or Texas Woman's University (TWU). Students

enrolled through either UNT or TWU have the opportunity to take courses, participate in seminars and conferences, and conduct research at both universities. Research opportunities at UNT include pyrimidine metabolism in bacteria; *Pseudomonas* ATCase; mechanisms of natural transformation in Gram-negative bacteria; organization and evolution of *Pseudomonas* catabolic plasmids; role of 5-hydroxytryptamine in the regulation of glycogenolysis; cyanide biodegradation; chemistry and enzymology of pathways for catabolism of aromatic compounds in soil microorganisms; brain-stem lipids; mammalian and plant gene structure, organization and expression; and regulations of blood cell differentiation. Research opportunities at TWU include binding and transport in cell membranes, gene regulation and hormone action, glycoprotein synthesis and secretion, functions of estrogen compounds in plants, biology of retro-viruses, bacterial conjugation and gene transfer, aspects of brain development and brain function, and mechanisms of generating motor patterns. Visit the web site at *www.biol.unt.edu* for research interests of the UNT faculty. Visit *www.twu.edu/ac/bio* for the research interests of the TWU faculty. Applications are considered for the molecular biology program only after meeting the admission requirements either of the Robert B. Toulouse School of Graduate Studies and the Department of Biological Sciences at UNT or the Graduate School and Department of Biology at TWU. Information on degree requirements at UNT follows the program descriptions.

Degrees in Molecular Biology

- **Master of Arts (MA) in Molecular Biology** is a non-thesis degree offered through UNT that requires 36 hours with two options: (1) 30 hours of organized course work at the 5000 and 6000 levels and a 6-hour problems in lieu of thesis; or (2) 36 hours of formal course work at the 5000 and 6000 levels. Students completing the non-thesis MA at UNT are not eligible for the PhD program in the Department of Biological Sciences. The MA degree has a foreign language requirement.
- **Master of Science (MS) in Molecular Biology** is a 30-hour research degree offered through UNT that requires 24 hours of formal course work, special problems, and seminars at the 5000 and 6000 levels, plus a 6-hour thesis.
- **Doctor of Philosophy (PhD) in Molecular Biology** is a scholarly research program, offered through the Federation of North Texas Area Universities, of 90 hours at the 5000 and 6000 levels beyond the bachelor's degree or 60 hours beyond the master's degree, including a 12-hour dissertation.

Environmental Science Program

Research Faculty: Atkinson, Beitinger, Dickson, Huggett, Kennedy, LaPoint, Roberts, Stevens, Thompson, Venables, Waller, Zimmerman.

The environmental science program is an interdisciplinary collaboration among the Department of Biological Sciences, the Department of Geography, the Department of Chemistry, the Department of Philosophy and Religion Studies and other departments at UNT. The program offers graduate studies in environmental science that lead to the MS and PhD, granted through the Department of Biological Sciences. The course of study, involving both core and elective courses, is designed to accommodate students with various backgrounds and interests in the natural, physical and social sciences who desire careers related to environmental science. Students are trained to identify problems, collect and interpret data, and develop solutions to complex and challenging environmental problems facing municipalities, industries, utilities and government agencies.

Visit *www.biol.unt.edu* or *www.ias.unt.edu* for more information on the diverse research interests of the environmental science program faculty, including aquatic biology, analytical chemistry, aquatic and terrestrial toxicology, ecology, ecophysiology, limnology, remote sensing and land use analysis, and environmental modeling. Information on degree requirements follows the program descriptions.

Degrees in Environmental Science

- **Master of Science (MS) in Environmental Science** has two options: (1) a 36-hour scholarly research degree that requires 30 hours of organized course work, special problems, and seminars at the 5000 and 6000 levels, plus a 6-hour thesis; or (2) a 42-hour program of organized course work at the 5000 and 6000 levels. The thesis option includes a core of 19 or 20 semester hours (depending on which optional core courses are selected), with the remaining 16 or 17 semester hours selected from a list of electives. The non-thesis option includes a core of 25 to 28 semester hours (depending on which optional core courses are selected), with the remaining 14 to 17 hours selected from a list of electives. Each student must select the thesis or non-thesis option upon admission to the program and, with the guidance of a graduate advisory committee, develop an individual degree plan according to the student's area of interest. Students completing the non-thesis option are not eligible for the PhD program in the Department of Biological Sciences.
- **Doctor of Philosophy (PhD) in Environmental Science** is a scholarly research program of 90 hours at the 5000 and 6000 levels beyond the bachelor's

degree or 60 hours beyond the master's degree, including a 12-hour dissertation. The degree plan includes 41 to 45 semester hours of core requirements (depending on which optional core courses are selected) and 12 hours of dissertation. The remaining hours are selected from a list of electives, the number of hours depending on whether the student is in the 60-hour or 90-hour program.

Degree Requirements and Procedures

Biology, Biochemistry, Molecular Biology and Environmental Science Programs

Master's Degree

1. The program and specific degree is determined before admission.

2. During the **first** long term/semester, the student and major professor select an advisory committee of two other faculty members, one of whom must be from the departmental faculty. The third may be from another UNT department, the Federation of North Texas Area Universities, or another university if the member is granted adjunct status in the department. Additional members may be added to the committee as long as the majority of the committee are faculty in the Department of Biological Sciences. A copy of the form designating the committee should be filed with the graduate advising secretary before the student's second long term/semester. Students in the MS in biology (Teaching in the Life Sciences) are advised by the Teaching in the Life Sciences Program Selection Committee.

3. Before registering for the **second** long term/semester, the student, major professor and advisory committee formulate a degree plan of the courses to be taken by the student, including core course requirements and deficiency work. Research MS students in biology, biochemistry and molecular biology must take a minimum of 24 hours of formal courses, special problems and seminars, plus 6 hours of thesis.

Students in the MS in biology (Teaching in the Life Sciences) must take 18 hours of biology courses, including BIOL 5260, 5830 and 6150, plus 18 hours in secondary education (EDSE 5002, 5004, 5005, 5105, 5115 and 5470).

Students in the biology program's MA course work–only option must take a minimum of 36 hours of formal 5000-6000 level courses. Students in the biology program's MA problems in lieu of thesis option must take 30 hours of formal courses plus 6 hours of problems in lieu of thesis. The MA has a language requirement.

Research MS students in environmental science must take a minimum of 30 hours of formal courses, special problems and seminars, plus 6 hours of thesis.

Students in the environmental science MS nonthesis option must take a minimum of 42 hours of formal 5000- to 6000-level courses. Only 6 hours of special problems (5900/5910) may be applied to the research MS degree program.

The degree plan, signed by all committee members, should be filed with the graduate advising secretary for programs in biology, biochemistry and molecular biology, or with the environmental science program's graduate advising secretary, before the beginning of the student's second long term/semester. The degree plan must be approved by the chair of the Department of Biological Sciences before it is forwarded to the Robert B. Toulouse School of Graduate Studies.

All course work must be at the 5000 and 6000 levels. Students pursuing the MA or MS may not receive graduate credit for any course below the 4000 level by taking the course under a 5000-level designation, such as special problems. Undergraduate courses, except those cross listed as graduate courses, are considered to be deficiencies and are not included in the graduate degree plan hours.

4. Before registering for the **third** long term/semester, students on a thesis or problems in lieu of thesis track should submit a formal research proposal to the major professor and advisory committee for approval. Students may not register for thesis (5950) or problems in lieu of thesis (5920/5930) until an approved research proposal is filed with the graduate advising secretary.

5. After the approved research proposal is filed, the student may register for thesis or problems in lieu of thesis hours. Once registered for thesis, but not problems in lieu of thesis, **the student must maintain continuous enrollment in at least 3 hours of 5950 during each long term/semester until the thesis is submitted to the graduate school**. Failure to maintain continuous enrollment may invalidate previous thesis credit or result in the student being dropped from the degree program, unless granted an official leave of absence by the dean of the Robert B. Toulouse School of Graduate Studies. If the student uses university facilities or faculty time or both during one or more summer terms/semesters, the student must also enroll for a minimum of 3 hours of 5950 during the summer.

6. Following approval by the major professor, a draft of the completed thesis or problems in lieu of thesis must be submitted to the committee at least two weeks prior to its defense and final examination.

7. A formal public seminar based on the thesis must be presented by the student to the department (students pursuing a problems in lieu of thesis present

only to their committee) during the student's final term/semester. The student must schedule a room for and publicly advertise the seminar and defense through the graduate advising secretary for biology, biochemistry and molecular biology, or environmental science.

8. Directly following the seminar, the student defends the thesis in a final oral examination conducted by the major professor and advisory committee.

9. Students in the MA 36-hour biology course work option and the environmental science MS non-thesis option must take a final comprehensive oral examination given by the adviser/major professor and advisory committee during the final term/semester. Students in the MA problems in lieu of thesis option must take their final examination during presentation of the problems in lieu of thesis to the faculty adviser/major professor and advisory committee in the final term/semester. Students in the MS in biology (Teaching in the Life Sciences) must take a final oral comprehensive examination given by the Teaching in the Life Sciences Advisory Committee during the final term/semester.

10. The student is responsible for completing all requirements and meeting all deadlines for graduation within the time specified by the graduate school.

11. A final copy of the student's thesis or problems in lieu of thesis must be submitted to the Department of Biological Sciences main office, either bound or on disk in .pdf format.

Doctoral Degree

1. During the **second** long term/semester, the student and major professor select an advisory committee of four other faculty members, three of whom must be from the department faculty. The fourth may be from another UNT department, the Federation of North Texas Area Universities or another university if the member is granted adjunct status in the department. Additional members may be added to the committee as long as the majority of the committee are faculty in the Department of Biological Sciences. A copy of the form designating the committee should be filed with the graduate advising secretary before the student's third long term/semester.

2. Before registering for the **third** long term/semester, the student, major professor and advisory committee prepare a formal degree plan of the courses to be taken by the student, including the language or tool-subject requirement. The degree plan consists of 60 hours for students with an approved master's degree, or 90 hours for students having only a bachelor's degree, including 12 hours of dissertation. Only 6 hours of special problems (6900/6910) may be counted toward the degree. The number of individual research (6940) hours counted toward the degree is determined by the adviser and advisory committee. A copy of the degree plan, signed by all committee members, should be submitted to the graduate advising secretary before the student's **third** long term/semester. All course work must be at the 5000 and 6000 levels. Doctoral students may not receive graduate credit for any undergraduate course by taking the course under a 5000- or 6000-level designation, such as special problems. Undergraduate courses, except those cross listed as graduate courses, are considered to be deficiencies and are not included in the graduate degree plan hours.

3. Students must satisfy the Robert B. Toulouse School of Graduate Studies' language requirement or, in lieu of a foreign language, students may complete 6 hours of acceptable tool-subject courses specified by the major professor and the advisory committee. Exceptions to this requirement may be made for students whose native language is not English.

4. Students who filed degree plans prior to 1996 were required to select, in consultation with the major professor, a UNT faculty member from outside the department to serve as a university committee member. Students filing a degree plan after 1996 are not required but may choose to have an external UNT committee member. It is the responsibility of the student and major professor to make all contacts with the external committee member.

5. Before registering for the **fifth** long term/semester, a formal research proposal should be submitted to the major professor and advisory committee for approval. Students should have an approved research proposal filed with the graduate advising secretary for programs in biology, biochemistry and molecular biology, or environmental science prior to registering for dissertation (6950).

6. Only following submission and approval of the research proposal may the student begin registering for dissertation hours. Once registered for dissertation, **the student must maintain continuous enrollment in at least 3 hours of 6950 during each long term/semester until the dissertation is submitted to the graduate school**. Failure to maintain continuous enrollment may invalidate previous 6950 credit or result in the student being dropped from the degree program, unless granted an official leave of absence by the dean of the Robert B. Toulouse School of Graduate Studies. If the student uses university facilities or faculty time or both during one or both summer terms/semesters, the student must also enroll for a minimum of 3 hours of 6950 during the summer.

7. Doctoral students may take written and oral candidacy examinations only after completion of all of their degree plan course requirements. Oral examinations may be taken only after the student has passed all written examinations. **Both examinations must be completed at least nine months prior to graduation.** The manner and form of the written and oral candidacy examinations are determined by the major professor, who is chair of the student's advisory committee, and the committee members. The student must schedule a room for the examinations through the graduate advising secretary for biology, biochemistry, molecular biology or environmental science. The committee members should send all written examinations to the graduate advising secretary at least one day prior to the scheduled date of the examination. The examining professor sets guidelines for administration of written examinations.

8. Following approval by the major professor, a draft of the dissertation must be submitted to the committee at least two weeks prior to the defense of the dissertation and final examination.

9. A formal seminar based on the dissertation must be presented by the student during the student's final term/semester. The candidate must schedule a room for and publicly advertise the seminar and defense through the graduate advising secretary for biology, biochemistry, molecular biology or environmental science.

10. Directly following the seminar, the candidate defends the dissertation in a final oral examination conducted by the major professor and advisory committee.

11. The candidate is responsible for completing all requirements and meeting all deadlines for graduation within the time specified by the graduate school.

12. A final copy of the dissertation must be submitted to the Department of Biological Sciences main office either bound or on disk in .pdf format.

Institute of Applied Sciences

Main Office
Environmental Education, Science and Technology Building, 215
P.O. Box 310559
Denton, TX 76203-0559
(940) 565-2694

Web site: *www.ias.unt.edu*
E-mail: lapoint@unt.edu or cking@unt.edu

Thomas LaPoint, Director

The Institute of Applied Sciences (IAS) provides research and educational programs that address the natural and human resource issues facing Texas, the nation and the world. With an emphasis on water, land, people and communities, IAS seeks to explore resources for the future. The strength of IAS is its interdisciplinary approach to instruction, research and community service. The Institute is presently organized into four program areas: water resources, environmental chemistry, remote sensing and land use analysis, and archaeology. The institute provides educational programs for students seeking training in environmental studies and other applied science areas. It also offers continuing education programs such as workshops, mini-courses, seminars and symposia to the public.

Activities include basic and applied studies in a variety of fields, including the analysis of trace organic and inorganic compounds in air, water, soils, waste materials and biological samples; toxicology; land use analysis via remote sensing and Geographic Information Systems (GIS); archaeological reconnaissance and salvage; and water resources management. The institute is particularly active in the coordination and execution of joint research projects with industry and governmental agencies in these areas. The following centers support this role.

Aquatic Toxicology and Reservoir Limnology

As one of the foremost aquatic toxicology laboratories in the Southwest, the lab is equipped to conduct acute and chronic toxicity tests with freshwater and marine organisms for industries and municipalities on the effects of chemicals on aquatic ecosystems. The reservoir limnology program conducts water quality research on rivers and reservoirs throughout Texas.

Center for Remote Sensing

The Center for Remote Sensing (CRS) applies remote sensing technologies and Geographic Information Systems (GIS) to land use and water resources issues. The center's state-of-the-art computer facilities for remote sensing data collection, image enhancement, classification and analyses support a variety of basic and applied research. The primary thrust of the research is to understand interrelationships between local or regional land use patterns and water quality. The center has a fully equipped Earth Resources Data Analysis System (ERDAS) and ARC/INFO capabilities.

Center for Watershed and Reservoir Assessment and Management

Surface reservoirs in Texas currently provide 55 percent of drinking water for Texas citizens and serve as significant sources of water for agriculture, industry and recreation. However, maintaining these services is becoming increasingly more difficult and

complex. The center offers scientific knowledge and expertise to address the current and emerging watershed scale issues of Texas. The center's expertise is based on 60 years of problem-solving research and state-of-the-art capabilities.

Ecological Risk Assessment/Water Research Field Station

UNT has two of the few facilities in the U.S. designed to assess, under field conditions, the effects of new chemicals and pesticides on aquatic ecosystems prior to their use in the general environment. The Water Research Field Station (WRFS) consists of 48 aquatic testing ponds of 0.1 acre each and 52 1,000- and 10,000-liter microcosms. The Artificial Stream Facility has 12 replicate five-meter streams, each capable of being colonized by aquatic species. The WRFS is specifically designed to assess the impacts of agrichemicals on aquatic populations and communities. The field station and stream facility are supported on campus by a biological and residue analysis laboratory with state-of-the-art equipment.

Environmental Chemistry

The Environmental Chemistry Laboratory supports research on the physical and chemical processes that control the fate and effect of chemicals in soil, surface water, ground water and the atmosphere using state-of-the-art equipment to analyze metals and organic chemicals in water and soils.

Environmental Archaeology and Geology

The institute's faculty are experienced in the design and implementation of cultural resource management projects. The emphasis is on reconstruction of past environments and cultural ecology as part of archaeological research. Quaternary geologic studies are supported by a sediment-soils laboratory that has full capabilities for mechanical, chemical and mineralogical analyses of samples from archaeological sites and natural deposits. A comparative osteology lab maintains an extensive collection of animal skeletons for zooarchaeological research and forensic analysis. An off-campus lab includes facilities for artifact washing and cataloging, detailed analysis and artifact curation. Environmental geology, groundwater hydrology, geomorphology, soil science, sedimentology and hydrology research are also conducted.

Environmental Modeling

This laboratory develops and uses mathematical models and computer simulations for the assessment of risks and impacts of anthropogenic stressors on ecological systems. Research is conducted at local, landscape, regional and global scales. The main themes of the laboratory involve linking of environmental models to remote sensing, GIS and other advanced technology in order to understand landscape and regional dynamics; reveal global change effects on ecosystems; and to relate environmental policies to environmental issues and economic development.

Center for Network Neuroscience

Main Office
Science Research Building, 120
P.O. Box 305220
Denton, TX 76203-5220
(940) 565-3615

E-mail: gwgross@cnns.org

Guenter W. Gross, Director

Students interested in neurobiology, neuropharmacology, tissue-based biosensors or the mathematics of neural modeling may participate in an interdisciplinary research effort directed at investigating the behavior of neurons in networks and the application of network dynamics to the field of neurotoxicology, drug development, biosensors and small ensemble information processing.

The center specializes in *in vitro* preparations, especially monolayer cultures of mammalian (mouse) central nervous system cells that emphasize research on pattern generation. The center pioneered the development and application of photoetched multimicroelectrode arrays and special culture chambers that allow the simultaneous monitoring of electrical activity at 64 sites in a network. Sophisticated multichannel data analysis systems support these research efforts.

Laboratory of Forensic Anthropology and Human Identification

Main Office
Department of Biological Sciences

E-mail: harrell@unt.edu

Harrell Gill-King, Director

The Laboratory of Forensic Anthropology and Human Identification provides field search and recovery technology and scientific laboratory analysis of human remains to medical examiners, coroners and law enforcement agencies within the state of Texas. The laboratory also provides accredited professional training in forensic science to death investigators. The main laboratory and x-ray facility are housed in the Department of Biological Sciences together with a teaching laboratory. Cooperating facilities include the Videocomputing Laboratory (Center for Instructional Services) and the Zooarchaeology Laboratory (Institute of Applied

Sciences). Research activities focus on material properties of bone, isotopic dietary reconstruction and taphonomy.

Financial Support

Most of our graduate students are supported through teaching assistantships (TAs) and research assistantships (RAs) funded through research grants to faculty. Assistantships are limited to 20 hours per week, which is considered as half-time employment. Nine-month stipends range from $10,800 for entering master's students to $12,400 for PhD candidates. In addition, out-of-state and international students who are supported at least one-half time are eligible for in-state tuition. Students supported for nine months on TAs or RAs are eligible for 12-month health insurance coverage. A limited number of summer TAs are available. Contact the Administrative Services Officer at (940) 565-3600 for further information about assistantships. Contact Student Financial Aid and Scholarships at (940) 565-2302 for student loan information.

Courses of Instruction

All Courses of Instruction are located in one section at the back of this catalog.

Course and Subject Guide

The "Course and Subject Guide," found in the Courses of Instruction section of this book, serves as a table of contents and provides quick access to subject areas and prefixes.

Department of Chemistry

Main Departmental Office
Chemistry Building, 101
P.O. Box 305070
Denton, TX 76203-5070
(940) 565-2713

Web site: *www.chem.unt.edu*
E-mail: chem@unt.edu

Ruthanne D. Thomas, Chair

Graduate Faculty: Acree, Borden, Chyan, Cooke, Cundari, Golden, Kelber, J. Marshall, P. Marshall, Mason, Omary, Richmond, Schwartz, Selby, Theriot, Thomas, Verbeck, Wilson.

Student stipends, including teaching assistantships and research fellowships, are available from a variety of sources. Stipends may range up to $20,000 per year depending upon demonstrated academic and research competence. Further information may be obtained from the chair of the Graduate Affairs Committee.

Research

A variety of research programs are in progress involving analytical, computational, inorganic, organic and physical chemistry, as well as chemistry education. Specific areas of study include synthesis, properties and kinetic investigations of transition metal carbonyls; syntheses and properties of nitrogen heterocycles; NMR applications to organometallic chemistry; gas phase kinetics; spectroelectrochemistry; morphology of inorganic precipitates; thermodynamics; Raman scattering; materials analysis and development; properties of surface adsorbed molecules; crystallography; polymer liquid crystals; interfacial processes; organosilicon synthesis and kinetics; polycyclic cage compounds; ferroelectric thin films; basis set development; computer-aided catalyst design; computational organic chemistry; chemical vapor deposition; and reactivities of metal and oxide surfaces.

The department possesses more than $6.3 million of capital equipment, including 200 MHz, 300 MHz and 500 MHz multinuclear FT-NMR with CP/MAS solids capability, Auger/ESCA, FT-IR, Raman, mass spectrometers, HPLC GCs, GCIMs, Powder XRD, single crystal XRD, AA, uv-vis, electrochemical analyzers stopped-flow kinetic analyzer, pulsed-laser flash photolysis, laser-induced fluorescence spectrometers. Within the chemistry department,

there are four computer server rooms, which house several state-of-the-art Linux computer clusters and super computers, entailing more than 500 processors available for the department's computational chemistry research endeavors.

Studies are conducted with the assistance of graduate and undergraduate students, research technicians and post-doctoral fellows. Other technical personnel include full-time instrument technicians and a glassblower.

Financial support for research is provided by the Robert A. Welch Foundation, the National Science Foundation, the Air Force Office of Scientific Research, the Army Research Office, the Office of Naval Research and the Department of Energy.

Additional sources of research funding include the Texas Advanced Research and Technology Program, Texas Instruments, Electrical Power Research Institute, Sun Exploration, the UNT Faculty Research Fund and several industrial fellowships.

Admission Requirements

Departmental forms for applying for teaching and research support may be obtained from the Student Services Office in the Department of Chemistry or from the World Wide Web. Complete college transcripts, two letters of recommendation and an acceptable GRE score are required for conditional admission. Contact the department or the Toulouse School of Graduate Studies for information concerning acceptable admission test scores.

New students should contact the Student Services Office immediately upon arriving on campus for information on departmental requirements. A departmental policy bulletin that delineates these requirements is available to students.

Students must take placement examinations covering undergraduate analytical, inorganic, organic and physical chemistry. These examinations are given during registration week of each long term/semester. The results of these examinations are used for counseling purposes. The chemistry department employs a core course system that requires its students to take graduate courses in specified areas.

Advisory Program

The chemistry Graduate Affairs Committee serves as adviser to the beginning student. When a field of specialization and a major professor have been selected, a committee is then appointed to serve in an advisory capacity. The minimum number of committee members is two for the master's and four for the doctoral advisory committee. The student meets yearly with this committee for research progress reports and consultation. PhD committees will also choose an individual from outside the university who is knowledgeable in the student's area of research to serve in an advisory capacity to the committee.

Degree Programs

The department offers graduate programs leading to the following degrees:

- Master of Science with a major in chemistry; and
- Doctor of Philosophy with a major in chemistry.

Concentrations are available at the master's level in analytical, computational, industrial, inorganic, organic or physical chemistry or chemistry education.

Concentrations at the doctoral level are available in analytical, computational, inorganic, organic or physical chemistry or chemistry education.

Below is an abbreviated description of each of the degrees offered. Complete descriptions of degree requirements are contained in the *Department of Chemistry Graduate Policy Bulletin*. A copy can be obtained from the chair of the Graduate Affairs Committee.

Master of Science

Analytical, Inorganic, Organic or Physical Chemistry

The applicant seeking a master's degree in one of these areas will plan a program with the assistance of the advisory professor and the advisory committee. A graduate major must present credit for at least 30 semester hours. The student must maintain a B average in all formal chemistry course work. The student must write a thesis describing his or her research and must defend the thesis at an oral examination administered by the advisory committee.

The Department of Chemistry requires completion of three of the four core courses (one of which must be in the student's area of research) with an average grade of B or above. A thesis is required.

Industrial Chemistry

This degree is designed for students with specific interests in selected areas of applied chemistry. The degree requirements are determined by consultation with the graduate affairs committee. The program leads to a non-thesis degree requiring 36 semester hours of formal course work, at least one-half of which (18 hours) must be in chemistry. Supplemental non-chemistry courses must include at least 12 hours and must be approved by the student's committee. In addition to the formal courses, either 3 or 6 hours of the total 36 hours must comprise on the job research training in an industrial position (or equivalent on the job training).

Chemistry Education

This program is designed primarily for students who do not possess a degree in chemistry (e.g., secondary education majors) but who may desire to enter a graduate program. With the aid of the chemistry adviser, the student may choose a 30-semester-hour program, including thesis, or a 36-semester-hour program without thesis. In order to qualify for this degree, a student must have received teaching certification prior to admission or must obtain this certification prior to receiving the degree.

Under each option above, a minimum of 18 hours of the formal graduate courses must be in the chemistry department. Of these 18 hours, course work must include three 3-hour graduate-level (5000 or above) lecture classes in any of the four traditional areas of chemistry (analytical, inorganic, organic, physical). The other 9 hours may include courses in chemistry education or other approved chemistry courses. The remaining 18 hours required for the chemistry education concentration are the graduate courses required for certification, if the student is not already certified. If the student is already a certified teacher, the 18 remaining hours may be selected from graduate-level chemistry courses or other approved graduate courses. No more than 3 credits of seminar may be included in the required 30 or 36 hours.

Doctor of Philosophy

The course requirements for the PhD degree require that a student complete core courses in three of the four areas of chemistry (including the student's area of research). Students must complete three additional advanced courses (of which at least two must be in the Department of Chemistry). The student must maintain a B average or better in these six courses. This research must culminate in the writing of a dissertation of demonstrable scientific merit. It is normally required that at least one paper be accepted in a refereed journal by the time of the oral defense.

After completion of the formal course work, tool-subject (course options for the tool-subject are available from the department), and CHEM 6010, the student will apply to the dean of the Toulouse School of Graduate Studies for admission to candidacy for the Doctor of Philosophy degree. This should be done at least one year before graduation.

Courses of Instruction

All Courses of Instruction are located in one section at the back of this catalog.

Course and Subject Guide

The "Course and Subject Guide," found in the Courses of Instruction section of this book, serves as a table of contents and provides quick access to subject areas and prefixes.

Department of Communication Studies

Main Departmental Office
General Academic Building, 309
P.O. Box 305268
Denton, TX 76203-5268
(940) 565-2588

Fax: (940) 565-3630

Web site: *www.comm.unt.edu*

John M. Allison, Chair

Graduate Faculty: Allison, Anderson, Gossett, Lain, Richardson, Taylor, Trudeau.

The Department of Communication Studies offers the following degrees:

- Master of Arts, and
- Master of Science, both with a major in communication studies.

Theory and research in communication studies examine communication in human affairs and the symbolic processes through which humans interact. The curriculum is designed to facilitate student mastery of theory and research, to develop student research capabilities and to enhance student preparation for a variety of careers or for further graduate study.

The department offers course work in rhetorical, performance and social science traditions. Students are afforded opportunities to explore communication from applied and theoretical perspectives using analytical, critical, quantitative and qualitative methodologies. Course work features the investigation of communication in interpersonal, organizational, aesthetic, health, cultural, intercultural, legal, political and international contexts. Students will encounter topics such as gender and diversity issues, social change, conflict and narrative. The graduate experience often is enhanced by opportunities to engage in consulting; conducting research with faculty members; and participating in regional and national festivals and professional conferences, and/or internships

with corporations, social service organizations, arts organizations and government agencies.

Teaching assistantships are awarded competitively to prospective students with excellent academic backgrounds and potential as effective classroom teachers. Interested individuals should contact the department office for application materials.

Graduates of this program should be able to demonstrate competence in making a public oral presentation or performance; demonstrate advanced knowledge of the field of communication studies by designing and conducting an original research project and presenting the findings and implications of that research in appropriate form; interpret, explain, present, and/or illustrate knowledge of theoretical concepts in communication studies; present an effective oral defense of arguments; explain the dynamic interrelationship among communicators, contexts and culture in the generation and processing of instances of communication; and demonstrate competence in written communication in terms of content as well as form.

The department also supports an interdisciplinary doctorate with a major in information science. See the School of Library and Information Sciences section of this catalog for more information.

Research

Research interests of the faculty in the Department of Communication Studies include the areas of:

1. rhetorical analysis and criticism of persuasive public communication in historical, political and cultural contexts;
2. the role of communication in organizations, professions and groups, including planned social change, superior-subordinate-coworker communication, training and consulting, conflict management, interpersonal and professional relationships, and small group communication and decision-making;
3. performance of texts, literary and performance theory and criticism, history of performance studies, intertextuality, phenomenology, and literary and rhetorical applications of narrative theory;
4. interpersonal communication, including listening, communication apprehension, intimate communication, gender and communication, communication in the family, communication and aging, communication style and assertiveness, health communication, mediation, interpersonal conflict, human information processing and interpersonal influence;
5. legal communication, including investigation of theories and case law related to the First Amendment guarantee of freedom of speech, as well as applied research related to expert testimony;
6. critical and cultural studies of communication, cultural values, ideologies and politics;
7. intercultural communication; and
8. narrative studies.

Admission Requirements

Because of the interdisciplinary nature of much of the work done in the Department of Communication Studies, admission is open to many who did not major in communication as undergraduates. Applicants with fewer than 24 hours of undergraduate communication course work may request admission on the basis of communication-related courses.

Application to the master's program in communication studies involves completion of two separate applications. The prospective student files the application with the Toulouse School of Graduate Studies (available at the Toulouse School of Graduate Studies web site). A second application, submitted to the Graduate Standards Committee in the Department of Communication Studies, should include the following:

1. A signed letter of application that includes a statement addressing the applicant's purpose in undertaking graduate study in the UNT communication studies department. In addition to indicating the semester and year he or she would like to enter the program, the applicant should include professional plans, career goals and areas of research interest.
2. Academic transcripts of all previous undergraduate and graduate course work.
3. A current curriculum vitae or resume that addresses each of the following areas:
   a. educational background;
   b. previous work experience;
   c. publications, performances, exhibitions or other scholarly activities;
   d. previous research experience; and/or
   e. involvement in community activities.
4. Two letters of recommendation from individuals familiar with the applicant's academic and/or professional abilities. At least one letter must be from an individual at the last academic institution attended; one letter may be from a current or past employer.
5. Verbal, quantitative, and analytical writing scores on the GRE. All students must take the GRE and report scores to the Toulouse School of Graduate Studies prior to being admitted to graduate study in the department. The Department of Communication Studies does not have a provisional admission status for applicants who have not taken the GRE.

6. A research-based essay or writing sample from a junior- or senior-level undergraduate course or an honors thesis.

The department utilizes a holistic approach in evaluating candidates for admission to the graduate program in communication studies. In examining the materials submitted by applicants for admission, we seek a positive indication of potential success in the program. In addition to the materials above, the department may consider the applicant's potential to enhance the intellectual diversity of the department and program, potential to enhance the diversity of the university, and other factors that might provide evidence of potential success in the completion of a master's degree with a major in communication studies.

Degree Programs

The department offers graduate programs leading to the following degrees:

- Master of Arts, and
- Master of Science, both with a major in communication studies.

The master's degree requires the completion of at least 36 hours of graduate course work.

There are three options for the degree:

1. 36 hours: 30 hours of course work in communication studies, 6 hours of thesis and oral examination;

2. 36 hours: 33 hours of course work in communication studies, 3 hours of COMM 5920 (Research Problems in Lieu of Thesis) and written and oral comprehensive examinations; or

3. 36 hours: 33 hours of course work in communication studies, 3 hours of COMM 5481 (Graduate Internship in communication studies) and written and oral comprehensive examinations.

The Graduate School has a foreign language requirement for the Master of Arts degree.

Courses of Instruction

All Courses of Instruction are located in one section at the back of this catalog.

Course and Subject Guide

The "Course and Subject Guide," found in the Courses of Instruction section of this book, serves as a table of contents and provides quick access to subject areas and prefixes.

Department of Dance and Theatre

Main Departmental Office
Radio, TV, Film and Performing Arts Building, 242
P.O. Box 310607
Denton, TX 76203-0607
(940) 565-2211

Dance Office
Stovall Hall, 180
(940) 565-3432

Web site: *www.danceandtheatre.unt.edu*

Lorenzo Garcia, Chair

Graduate Faculty: Babcock, Cox, Cushman, Garcia, Grose, Hayes, Lakes, Wilson.

The Department of Dance and Theatre is dedicated to the professions of theatre and dance as central concerns of a civilized society and as primary methodologies in the education of its citizenry. Small groups of teachers and students, using as a foundation the artists and the artworks from both past and present and from all cultures and civilizations, collaborate in rehearsals and public performances derived from the finest possible classroom experiences. Scholarly and empirical research is combined with a high level of spontaneous creativity to develop the entire spectrum of theatre arts. Emphasis is placed on the impact between performing artists and appreciative spectators. Playwrights, actors, dancers, choreographers, directors, designers and technicians are taught to discover and to enhance their own creativity, to bear witness through their artistry to the richness of human life and to make artistic performance the means of educating the people who are present when the performance occurs.

These student artists also must learn to design and manage each of the technical and administrative crafts that constitute the business of theatre and dance in the 21st century. A person who can create and manage a successful theatre or dance organization can do the same in any field for which a few of the basic skills have been acquired. There is no technology — that of computers, for example, lasers or the film and video industries — that does not manifest itself in the craft of theatre and dance.

The Department of Dance and Theatre operates several facilities designed and equipped to generate, organize and conduct research in dramatic performance. The Stovall performance space, four dance studios, an acting/directing studio, a scene shop and costume shop, scenery and costume collections,

and a department library indicate a commitment to providing the finest possible theatre and dance education.

Research

Faculty and students of the Department of Dance and Theatre engage in research through the development of artistic works and explorations of symbol transfer during the continuum of impact between spectators and dancers or actors. In addition, experimental and empirical studies are concerned with the phenomenology and the semiotics of dance and theatre activities as well as traditional methods of biographical, historical and literary research, and movement studies.

Topics on which research has been conducted in the department encompass actor/audience perceptions of a play in performance, actor/character relationships, directorial roles, British drama education, the theatre of Margo Jones, the educational theories of Bertolt Brecht, body-space and time-movement relationships, body language, and the social order and pragmatics of performer/audience communication.

This commitment to research and creativity in theatre and dance has generated continuing financial support from the Martha Gaylord-Tom Hughes Scholarship Program; the Katherine M. Altermann Scholarship Fund; the Ann Bradshaw Stokes Foundation; the Ralph B. Culp Endowment Fund; the Ed DeLatte Musical Theatre Scholarship; the Lucille Murchison Scholarships in Dance, Costuming and Technical Theatre; the Eugene Mills Dance Scholarships; and the Chun Hui Lee Dance Scholarships. Special funding and support has provided for the participation of the department in the 1990 Centennial production of *King Lear;* the hosting of the national American College Dance Festival; a multimedia event involving dance, music and sculpture at the Davis McLean Gallery in Houston in 1993; collaboration of theatre directing and the dramaturgy of a visiting Ibsen scholar in 1996; the performance of choreography selected by national adjudicators, to perform at the National American College Dance Festival in Washington, D.C., at the Kennedy Center, May, 1998; community support for a holiday production of "A Christmas Carol"; and the ongoing research promoting dance and theatre as central to education across the curriculum.

Courses of Instruction

All Courses of Instruction are located in one section at the back of this catalog.

Course and Subject Guide

The "Course and Subject Guide," found in the Courses of Instruction section of this book, serves as a table of contents and provides quick access to subject areas and prefixes.

Department of Economics

Main Departmental Office
Hickory Hall, 254
P.O. Box 311457
Denton, TX 76203-1457
(940) 565-2573

Web site: *www.econ.unt.edu*

Steven L. Cobb, Chair

Graduate Faculty: Cobb, Cooper, Hauge, Jewell, M. Kim, Y. S. Kim, McPherson, Molina, Nieswiadomy, Rous, Tieslau.

The Department of Economics is actively involved in educational and research activities designed to produce graduates with the economic background and quantitative skills necessary to succeed in today's labor market or PhD programs in economics and related subjects. Employers in business, industry, education and government are in need of employees that can analyze and interpret data. Our graduates are well prepared to meet these needs, and the demand for our students is growing.

The department offers degrees in the following programs:

- Master of Arts, and
- Master of Science, both with a major in economics. Both programs are directed toward students who plan to obtain a PhD in economics;
- Master of Science degree with a major in economic research, which is directed toward students who plan careers in financial institutions, public utilities, large manufacturing organizations and government agencies; and
- Master of Science degree with a major in labor and industrial relations that provides a unique interdisciplinary approach for students interested in labor-related careers in private industry, labor or governmental organizations.

Many of the research and educational efforts of the department are coordinated through its affiliated units. These units include the Center for Economic Education, the Center for International Economic

Studies and Research, and the Center for Environmental Economic Studies and Research.

Research

The Department of Economics is actively involved in a wide variety of research activities. The department supports the development of research teams composed of faculty and students to enhance productivity and learning. The faculty's research falls into five broad categories: econometrics, applied microeconomics, applied macroeconomics, public economics and international economics.

In the area of econometrics, faculty research includes work in Markov-switching models, propensity score matching, dynamic panel data and panel unit root tests that allow for structural breaks. The faculty is also involved in the application of full information maximum likelihood estimation, limited dependent variable approaches and discrete factor analysis applied to international development, economic education, health care and consumer decisions.

In the field of applied microeconomics, faculty research is particularly diverse. Recent work has involved health economics topics such as the effects of prenatal care on birth weights, demand for abortions and demand for contraception. In the field of labor economics, research is ongoing on the employment effects of the Job Training Partnership Act and into work life estimates. A great deal of research is being conducted in environmental economics, including the determinants of biodiversity and water policy. In addition, the department has a number of faculty members interested in the emerging field of sports economics, with current research under way into demand for professional soccer, the possible existence of discrimination in Major League Baseball Hall of Fame voting, and into the determinants and effects of changes in the distribution of income among professional athletes.

Faculty research in the area of applied macroeconomics includes inquiries into exchange rate stability, patterns of foreign investment and optimal government size. In addition, applications of growth theory and endogenous growth models are being examined and refined. The impact of inflation on government policy multipliers in the U.S. is another area of macroeconomic research.

The economics department's faculty includes a number of international economists with areas of specialization in Latin America, Africa, Southeast Asia, Europe and the former Soviet Union. Research in the area of international economics has involved international income distribution, within-country effects of economic integration, immigration, the transition economies of Eastern Europe and the former Soviet Union, and small-scale enterprise development in developing countries.

The faculty of the Department of Economics conducts an aggressive search for external funding in support of research programs. Funding for these programs is provided by the National Science Foundation, the U.S. Department of State, the Texas Education Agency, the National Occupational Information Coordination Committee, the Texas Workforce Commission, the Texas Council on Economic Education, the Environmental Protection Agency, USAID and the Soros Foundation.

Placement

The department has increased its emphasis on placement by designating one of the faculty as placement officer. The placement officer locates job openings, helps prepare students for interviews and develops internships for economics majors with private and public institutions in the Dallas–Fort Worth area.

Admission Requirements

The following admission requirements pertain to the Master of Arts and Master of Science with a major in economics, the Master of Science with a major in economic research and the Master of Science with a major in labor and industrial relations.

Applicants must first apply to and be admitted to the Toulouse School of Graduate Studies in order to be considered for admission to the graduate program in economics. Applicants are required to submit the following: full college transcripts; an acceptable grade point average (GPA); acceptable Graduate Record Examination (GRE) scores (both quantitative and analytical) or Graduate Management Admission Test (GMAT) scores; a personal essay; and two letters of recommendation. Each of these requirements is described in more detail below.

A student can be admitted without provisions if the student's undergraduate GPA is at least 3.0. Provisional admission can be obtained if a student has an initial GPA of at least 2.8, and this student earns a GPA of at least 3.0 during the first 12 hours of courses.

Acceptable test scores must be submitted before a student can enroll for a second term/semester in the program. For information regarding acceptable GRE/GMAT scores, contact the graduate adviser in the Department of Economics. Applicants whose native language is not English are required to score at least 550 on the conventional TOEFL exam, or at least 213 on the computerized version of the exam.

Applicants must submit a personal essay of no more than 500 words summarizing their accomplishments and their motivation for obtaining a

graduate degree in economics. When appropriate, applicants also should describe any special hardships they have overcome in order to reach this point in their academic career.

Two letters of recommendation should be solicited from people familiar with the applicant's academic potential. No special form is required. Letters should be sent directly to the graduate adviser in the Department of Economics.

Prerequisites

Although no specific undergraduate major is required, an appropriate background is desirable. Applicants for the Master of Arts with a major in economics, Master of Science with a major in economics, or Master of Science with a major in economic research must fulfill the following prerequisites or equivalents: 6 hours of Principles of Economics (ECON 1100 and 1110), 6 hours of Intermediate Economic Theory (ECON 3550 and 3560), Money and Financial Institutions (ECON 4020), Introduction to Econometrics (ECON 4870), 7 hours of Calculus (MATH 1710 and 1720) and an appropriate background in probability and statistics (ECON 5630 or MATH 4610 and 4650).

Applicants for the Master of Science with a major in labor and industrial relations must fulfill the following prerequisites or equivalents: undergraduate background prerequisites are 6 hours of basic macro- and microeconomics and 3 hours of statistics. These prerequisites may be satisfied by taking ECON 5000 and 5630.

Degree Programs

The department offers graduate programs leading to the following degrees:

- Master of Arts, and
- Master of Science, both with a major in economics;
- Master of Science with a major in economic research; and
- Master of Science with a major in labor and industrial relations.

All students must develop a degree plan in consultation with the graduate adviser.

Master of Arts and Master of Science with a Major in Economics

These are 36-hour programs, including an option for a 6-hour minor in a suitable field selected in consultation with the graduate adviser. MA and MS candidates are required to take ECON 5090 or 5100, 5330, 5340, 5600 and 5650. Candidates for the Master of Arts degree must meet the UNT foreign language requirement. Satisfactory completion of a written comprehensive exit exam plus a 6-hour master's thesis (ECON 5950) is required of all MA and MS candidates. ECON 5000, 5030, 5040 and 5630 are deficiency courses and do not count toward the 36 hours of course work.

Master of Science with a Major in Economic Research

Requirements of this program consist of a minimum of 36 semester hours of course work, including an option for a minor of 6 hours selected in consultation with the graduate adviser. Candidates in this program are required to take ECON 5330, 5340, 5600 and 5650. All students must pass a written comprehensive exam. There are two options for the completion of this degree. The first option is to take 6 hours of supervised Research Problems in Lieu of Thesis (ECON 5920-5930). The second option is to take 6 hours of additional graduate economics courses.

Master of Science with a Major in Labor and Industrial Relations

The major academic objective of the program is to prepare students for careers in labor and industrial relations. The multifaceted nature of labor/industrial problems in today's complex society requires individuals knowledgeable in various interrelated disciplines for positions in private industry and government organizations.

The graduate program is unique as an interdisciplinary effort involving courses in business administration, computer science, economics, education, engineering technology, psychology and public administration. The exact course of study leading to the Master of Science with a major in labor and industrial relations will be related to the career or academic goal of the particular candidate.

The program requires satisfactory completion of a minimum of 36 hours of study and research beyond the bachelor's degree. All labor and industrial relations students must pass a written comprehensive exam. There are two options for the completion of this degree. The first option is to take 6 hours of supervised Research Problems in Lieu of Thesis (ECON 5920-5930). The second option is to take 6 hours of additional graduate economics courses. Limited numbers of graduate research assistantships are available in conjunction with funded research projects.

Research Centers

Center for Economic Education

Steven L. Cobb, Director

The Center for Economic Education, winner of the 2005 Albert Beekhuis Award for Centers of Excellence in Economic Education, is committed to making formal instruction in economics more accessible to the broad community of North Central Texas.

The center directs a professional program of study leading to the Master of Science degree with a major in economics and a support area in economic education. The concentration in economics education is a 36-hour program designed to prepare teachers for economics instruction in secondary schools and community colleges. The course of study is designed in consultation with the director of the center and the graduate adviser for the Department of Economics.

The center also maintains an in-service teacher training program of course offerings regularly scheduled during evening hours and in the summer. This program provides a mechanism for the in-service training of economics teachers in community colleges and secondary and elementary schools.

In addition to its regional instructional programs, the center develops instructional material, conducts research in economics education, maintains an instructional resource center and provides technical assistance in matters pertaining to instruction in economics.

Center for International Economic Studies and Research

David J. Molina, Co-Director
Michael A. McPherson, Co-Director

The Center for International Economic Studies and Research has three primary objectives. The first is to promote research through the acquisition of external funding for projects focusing on the socioeconomic problems of Asia, Africa, Central and Eastern Europe, and Latin America. The center also coordinates undergraduate and graduate programs within existing departments for students interested in problems of these regions. Beyond the campus, the center develops relationships with other institutions, both public and private, for the exchange of scholars and students as well as joint research and conferences.

Center for Environmental Economic Studies and Research

Michael Nieswiadomy, Director

The Center for Environmental Economic Studies and Research promotes the use of economic tools to analyze environmental issues. The center also coordinates undergraduate major programs within existing departments for students interested in environmental topics. The center cooperates with other universities, educational institutions and government agencies to promote research and seminars on environmental economics for the public.

Courses of Instruction

All Courses of Instruction are located in one section at the back of this catalog.

Course and Subject Guide

The "Course and Subject Guide," found in the Courses of Instruction section of this book, serves as a table of contents and provides quick access to subject areas and prefixes.

Department of English

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Web site: *www.engl.unt.edu*

David Holdeman, Chair

Graduate Faculty: Armintor, Baird, Bataille, Benet, Bond, Chelliah, Cooke, Cukor-Avila, Duban, Foertsch, Hawkins, Holdeman, Kesterson, Larson-Hall, Marks, McCutchan, Menzer, Montler, Munshi, Muyumba, Peters, Pettit, Raign, Rodman, Ross, Roy, Simpkins, Sims, Smith, Tait, Tanner, Upchurch, Vanhoutte, Velarde.

Introduction

The faculty of the Department of English is a dynamic one with divisions devoted to English literature (literary and cultural studies), creative writing, technical writing (technical communication), linguistics and English as a second language (ESL).

The literature division offers a range of courses in British, American and world literature from the earliest periods to the present day. Courses in literary criticism and theory educate students in orthodox and postmodern modes of analysis, and various special topics courses offer students the opportunity to study literature and culture across conventional boundaries of period and discipline. The division

prides itself not only on the quality of its teaching, but also on its international scholarly reputation. Professors publish their work in top academic journals and, increasingly, in monographs and editions published by university presses. The department also sponsors the literature journal, *Studies in the Novel*.

The creative writing faculty consists of several nationally recognized writers, qualified not only as creative practitioners, but also as mentors and critics. Their books have been published by Dutton, BOA Editions, University of Georgia Press, Sarabande Books and other presses. Stories, essays and poems by faculty appear in journals such as *The Paris Review, Story, The Yale Review, Denver Quarterly, The Ohio Review, The Georgia Review* and *Creative Non-Fiction*. One of the distinctive strengths of graduate creative writing studies at UNT lies in how closely the literature and creative writing faculties work together, exploring ways in which knowledge of diverse literary traditions facilitates the development of one's own craft. In addition to its form and theory classes in fiction and poetry and its graduate workshops in fiction, poetry, creative non-fiction and screenwriting, the department offers a creative thesis (as part of its MA in creative writing) and a creative dissertation option (as part of its PhD in English). Each year the university sponsors a Visiting Writer Series in which students may attend both readings and pedagogical sessions with distinguished authors. Students also have opportunities to pursue editorial positions with the department's national literary journal, *American Literary Review*, and with the local student-run journal, *North Texas Review*, which in turn sponsors its own reading series involving faculty and students.

The University of North Texas offers a graduate program in technical writing (technical communication). Students graduating with a master's degree with a major in technical writing have enjoyed a 100 percent job placement rate since 1990. These graduates work in a variety of industries such as computer software and hardware, airlines, construction, consulting, and telecommunications. Through the program, students have the opportunity to work with faculty who not only are highly qualified teachers, but are also published scholars and consultants. The faculty have published in major journals, such as the *Technical Writing Quarterly, Technical Communication, IEEE Transactions on Professional Communication,* and *Journal of Business Communication*. They have also published books on technical communication and write for publishers such as Houghton Mifflin and Thomson/Wadsworth. Our faculty also work as consultants for companies across the United States, such as IBM, AT&T, Centex Construction, Alliance Data, and Nokia. The technical writing program at UNT offers students the opportunity to gain the theory and practice to work as technical communicators in any industry. Students also have the opportunity to complete internships in major companies across the U.S. Students have interned with major Fortune 500 Companies such as Microsoft, Southwest Airlines and AT&T. Those students seeking to enter PhD programs receive the kind of personal attention that results in subsequent placement into PhD programs of the highest caliber.

The linguistics division offers the MA degree both in linguistics and in English as a second language and a graduate academic certificate in teaching English to speakers of other languages (TESOL). All of the faculty in the division are scholars with national and international reputations. They are uniquely qualified not only across the core areas of linguistics (phonetics/phonology, morphology, syntax, semantics), but also in their various specializations: Native American linguistics, Southeast Asian linguistics, linguistic theory, language acquisition, sociolinguistics and applied linguistics. Students seeking the MA in linguistics receive the kind of personal attention and support that has invariably resulted in subsequent placement into PhD programs of the highest caliber. Those seeking the MA in ESL likewise receive personal attention; the extremely high placement rate of the division's MA/ESL graduates speaks for itself.

Degree Programs

The Department of English offers the following degrees:

- Master of Arts with a major in English;
- Master of Arts with a major in creative writing;
- Master of Arts with a major in technical writing;
- Master of Arts with a major in English as a second language (ESL);
- Master of Arts with a major in linguistics; and
- Doctor of Philosophy with a major in English.

The Department of English also offers a graduate academic certificate in teaching English to speakers of other languages.

Master of Arts

Admission Requirements and Procedures

Applicants for the MA with a major in English, technical writing, linguistics or ESL complete two parts. The applicant first files an application with the Toulouse School of Graduate Studies (available on the UNT Graduate School web site). The applicant then submits the following to the Department of English:

- a 300–500 word personal statement describing the applicant's interests, career plans and purpose in working toward an MA; and

- a current vita or resume

Applicants for the MA with a major in creative writing complete two parts. The applicant first files an application with the Toulouse School of Graduate Studies (available on the UNT Graduate School web site). The applicant then submits the following to the Department of English:

- a 300–500 word personal statement describing the applicant's interests, career plans and purpose in working toward an MA; and
- a writing portfolio consisting of a writing sample (10 pages of poetry or 15–25 pages of fiction).

To be eligible for admission to the MA with a major in English, creative writing, technical writing, linguistics or ESL, applicants must have at least a 3.0 GPA on the last 60 hours of undergraduate semester credit hours prior to receiving a bachelor's degree or a 2.8 GPA on all undergraduate work. The applicant must also submit scores from the Graduate Record Examination (GRE). The student must have taken the examination prior to or during the first term or semester of graduate study. A student who fails to comply with this requirement will not be allowed to re-register as a master's degree candidate with a major in English, creative writing, technical writing, linguistics or ESL. Applicants accepted into the MA with a major in English or creative writing have presented verbal scores ranging from the 50th to the 98th percentile and analytical writing scores ranging from 3.0 to 6.0. Applicants accepted into the MA with a major in technical writing, linguistics or ESL have presented verbal scores ranging from the 50th to the 99th percentile and analytical writing scores ranging from 4.0 to 6.0. Applicants whose native language is not English must also submit a score on the TOEFL examination. Scores on the computer-based TOEFL examination have ranged from 231 to 255.

Applicants for the MA with a major in English or creative writing must have completed up to 24 hours of undergraduate course work in English. The Chair of Graduate Studies will determine the prerequisite course work based on the applicant's educational background and area of scholarly interest. Applicants for the MA in a major in technical writing, linguistics or ESL must have completed up to 9 hours of undergraduate course work in technical writing, linguistics or ESL. The Chair of Graduate Studies will determine the prerequisite course work based on the applicant's educational background.

Financial Support

Beginning full-time students who meet all qualifications may apply for financial assistance in the form of the academic assistantship; those who have already completed 18 graduate hours in an area offered by the Department of English may apply for a teaching fellowship. Applications for both may be requested from the department by telephone at (940) 565-2114, or the department web site at *www.engl.unt.edu.*

Foreign Language Requirement

All candidates pursuing a master's degree in the Department of English must have a reading knowledge of at least one foreign language. As evidence of such foreign language, a student may present the results of a standardized examination or have completed the sophomore year of a foreign language, or the equivalent, provided that the grade point average on all language courses is 2.75 or higher. A student who has permission to write a thesis or to enroll in ENGL 5920-5930 will not be allowed to register for the courses until the foreign language requirement has been met.

Degree Plan Requirement

During the second term/semester of graduate work toward the master's degree, the student is required to file a degree plan in the office of the chair of graduate studies in English. Students should obtain an appointment as soon as possible after the registration period during their second term/semester's work.

Comprehensive Examination

Candidates for the MA with majors in English, creative writing and technical writing and candidates for the MA with majors in linguistics and ESL who choose Option III must pass the master's comprehensive examination. Candidates for the MA with a major in linguistics who choose Option I or Option II do not take the master's comprehensive examination. This examination is administered by the Department of English and is given every February, June and October. Students must register for this examination at the appropriate time in the office of the chair of graduate studies in English. Students should consult with the graduate adviser early in their programs to learn of the specific nature of the comprehensive examination. The comprehensive examination may be taken twice. If the candidate fails the examination on both occasions, then permission for any retake of the examination must be granted by the graduate committee.

Candidates for the MA program in linguistics who choose Option I or II must pass an oral defense of the written project prospectus as well as a defense of the completed project (thesis or two scholarly papers).

Application Checklist

Applicants should send the following materials directly to the Toulouse School of Graduate Studies.

1. A completed graduate application form with the intended major indicated in the appropriate blank.

2. Official Graduate Record Examination (GRE) scores sent from the Educational Testing Service. Candidates applying for all MA programs in English must take the GRE verbal and analytical writing sections.

3. Official scores from the Test of English as a Foreign Language (TOEFL) examination for students whose native language is not English.

4. Official transcripts for all previous undergraduate and graduate academic work.

5. For the major in creative writing only, admission is granted at the beginning of each fall and spring term/semester. The deadlines for application are as follows:

- January 15 and March 15 for admission in the fall term/semester
- July 15 and October 15 for admission in the spring term/semester.

Applicants for the MA with majors in English, technical writing, linguistics, and ESL should send the following materials directly to the Department of English:

1. a 300–500 word personal statement describing the applicant's interests, career plans and purpose in working toward an MA; and

2. a current vita or resume.

Applicants for the MA with a major in creative writing should send the following materials directly to the Department of English:

1. a 300–500 word personal statement describing the applicant's interests, career plans and purpose in working toward an MA; and

2. a writing portfolio consisting of a writing sample (10 pages of poetry or 15–25 pages of fiction).

Candidates also applying for an academic assistantship or teaching fellowship should send the following directly to the Department of English:

1. A teaching fellowship/academic assistantship application.

2. Three letters of recommendation that assess the candidate's potential both as scholar and as teacher.

3. Writing samples comprising two polished pieces (e.g., a research paper).

4. A taped conversation in English for candidates who are non-native speakers of English.

Master of Arts with a Major in English

Course Requirements

1. Required courses:

- ENGL 5750, Bibliography and Methods of Research in Literature, or LING 5070, Bibliography and Methods of Research in Linguistics/ESL
- ENGL 5760, Scholarly and Critical Writing, or LING 5590, Linguistics and Literature, or ENTW 5580, Theories in Composition
- ENGL 5810, Studies in Literary Criticism, or LING 5040, Principles of Linguistics, or ENGL 5170, Rhetorical Theory

2. Area courses (non-thesis option): in addition to the required courses listed above, the student who is not given permission to write a thesis or to enroll for ENGL 5920-5930 (Research Problems in Lieu of Thesis) must complete 27 semester credit hours of additional course work.

3. Area courses (thesis option): the student who is given permission to write a thesis or to enroll in ENGL 5920-5930 will complete 21 hours of course work (including 6 hours of thesis) in addition to the required courses listed above. Course work to complete the additional requirements may be taken in the traditional areas of literature, writing or linguistics, as approved by the chair of graduate studies. No student who has permission to write a thesis will be allowed to register for the courses until the foreign language requirement has been met and the MA comprehensive examination has been passed.

Master of Arts with a Major in Creative Writing

Course Requirements

All students must complete 36 hours of course work as follows:

Core Areas

3 hours:

- ENGL 5810, Studies in Literary Criticism

6–12 hours:

- ENGL 5420, Creative Writing: Poetry
- ENGL 5820, Creative Writing: Prose Fiction
- ENGL 5162, Creative Writing: Essay

3 hours:

- ENGL 5140, Form and Theory: Poetry
- ENGL 5145, Form and Theory: Prose

Allied Areas

9–15 hours:

- To be chosen from among various ENGL 5000- or 6000-level courses related to American or British literature.

Cognate Area

0–3 hours:

- Anthropology; Dance and Theatre; Radio/Television/Film; History; Linguistics; Music; Philosophy/Religion Studies; Political Science; Psychology; Sociology; Foreign Languages and Literatures; Visual Arts; Women's Studies

Thesis

6 hours:

- ENGL 5950, Master's Thesis

Thesis Requirement

The candidate for the MA with a major in creative writing must write a thesis. A student is permitted to write a thesis only with the permission of the chair of graduate studies and a major professor. No student who has permission to write a thesis will be allowed to register for the courses until the foreign language requirement has been met and the MA comprehensive examination has been passed.

Master of Arts with a Major in Technical Writing

Course Requirements

Option I: 36-Hour Program with Written Examination

Core Courses, 15 hours selected from the following:

- ENTW 5185, Principles of Technical Writing
- ENTW 5190, Style and Technical Writing
- ENTW 5195, Editing Technical Documents
- ENTW 5280, Designing Technical Documents
- ENTW 5285, Technical Presentations

Topics Courses, 6 hours selected from the following:

- ENGL 5170, Rhetorical Theory
- ENTW 5180, Professional Writing
- ENTW 5191, Technical Writing and the Computer
- ENTW 5550, Studies in the Teaching of Technical Composition

Practicum, 6 hours:

- ENTW 5640, Practicum in Technical Writing

Cognate Field: 9 hours:

- 9 hours of graduate-level courses
- Before registering in these courses, students must seek the approval from the Director of Technical Writing

Comprehensive examination

Option II: 30-Hour Program with Thesis

Core Courses, 15 hours selected from the following:

- ENTW 5185, Principles of Technical Writing
- ENTW 5190, Style and Technical Writing
- ENTW 5195, Editing Technical Documents
- ENTW 5280, Designing Technical Documents
- ENTW 5285, Technical Presentations

Topics Courses, 3–6 hours selected from the following:

- ENGL 5170, Rhetorical Theory
- ENTW 5180, Professional Writing
- ENTW 5191, Technical Writing and the Computer
- ENTW 5550, Studies in the Teaching of Technical Composition

Thesis, 6 hours:

- ENTW 5950, Master's Thesis

Cognate Field, 6–9 hours:

- 6–9 hours of graduate-level courses
- Before registering in these courses, students must seek the approval from the Director of Technical Writing

Comprehensive examinations and oral prospectus defense

Thesis Requirement

The candidate for the MA degree with a major in technical writing must write a thesis under Option II. A student is permitted to write a thesis only with the permission of the chair of graduate studies and a major professor. No student who has permission to write a thesis will be allowed to register for the courses until the foreign language requirement has been met and the MA comprehensive examination has been passed.

Master of Arts with a Major in Linguistics

Course Requirements

Option I: 30-Hour Program with Thesis

- LING 5300, Phonology
- LING 5310, Syntax
- 18 additional hours of graduate-level linguistics courses
- Master's thesis (including 6 hours of LING 5950)
- Oral comprehensive examination and prospectus defense

Option II: 30-Hour Program with Scholarly Papers

- LING 5300, Phonology
- LING 5310, Syntax
- 18 additional hours of graduate-level linguistics courses
- Two original scholarly papers (6 hours of LING 5920-5930)
- Oral comprehensive examination and prospectus defense

Option III: 36-Hour Program with Written Exam

- LING 5300, Phonology
- LING 5310, Syntax
- 30 additional hours of graduate-level linguistics courses
- Written comprehensive examination

Master of Arts with a Major in English as a Second Language

Course Requirements

Option I: 30-Hour Program with Thesis

- LING 5060, Second Language Acquisition
- LING 5080, Teaching English as a Second Language
- LING 5300, Phonology

- LING 5310, Syntax
- LING 5340, Practicum in Teaching English as a Second Language
- 9 additional hours of graduate-level linguistics courses
- Master's thesis (including 6 hours of ENGL 5950)
- Oral comprehensive examination and prospectus defense

Option II: 30-Hour Program with Scholarly Papers

- LING 5060, Second Language Acquisition
- LING 5080, Teaching English as a Second Language
- LING 5300, Phonology
- LING 5310, Syntax
- LING 5340, Practicum in Teaching English as a Second Language
- 9 additional hours of graduate-level linguistics courses
- Two original scholarly papers (6 hours of LING 5920-5930)
- Oral comprehensive examination and prospectus defense

Option III: 36-Hour Program with Written Exam

- LING 5060, Second Language Acquisition
- LING 5080, Teaching English as a Second Language
- LING 5300, Phonology
- LING 5310, Syntax
- LING 5340, Practicum in Teaching English as a Second Language
- 21 additional hours of graduate-level linguistics courses
- Written comprehensive examination

Thesis and Scholarly Papers Requirement

A student is permitted to write a thesis or scholarly papers only with the permission of the chair of graduate studies and a major professor. Before registering for thesis hours (LING 5950) or problems in lieu of thesis (LING 5920 and LING 5930), a student must have met the foreign language requirement.

Doctor of Philosophy with a Major in English

Admission Requirements and Procedures

Admission to the doctoral program in English is highly competitive. Admission is granted only at the beginning of each fall and spring terms/semesters. The deadlines for application are as follows:

- January 15 for admission in the fall term/semester
- October 15 for admission in the spring term/semester.

All applicants must meet the following minimum standards.

1. **Graduate Record Examination.** Applicants must submit scores on the Graduate Record Examination (GRE) verbal and analytical sections. Applicants accepted have presented verbal scores ranging from the 69th to the 99th percentile and analytical writing scores ranging from 4.0 to 6.0. The student must also meet GRE requirements established by the Graduate Council and must comply with general regulations concerning the GRE in relevant sections of this bulletin. Applicants whose native language is not English must submit scores on the GRE verbal and analytical sections and present a score on the TOEFL. Applicants accepted have presented TOEFL computer-based test scores ranging from 233 to 293.

2. **Academic record.** The applicant must have at least a 3.5 overall GPA on all undergraduate semester credit hours of work prior to receiving the bachelor's degree. An applicant who has completed any graduate-level work must have at least a 3.5 overall GPA on such graduate work.

3. **Toulouse School of Graduate Studies admission.** The applicant must meet the qualifications for admission set by the Toulouse School of Graduate Studies of the University of North Texas.

To apply to the doctoral program in English, applicants must submit all of the following:

- Toulouse School of Graduate Studies application for admission along with required transcripts and GRE/TOEFL examination reports.
- Letter of intent. The letter should explain why the applicant wants to work toward a Doctor of Philosophy with a major in English.
- Portfolio of writing samples. The portfolio must include at least two substantial writing samples, one of which must be an example of critical writing. Those interested in pursuing a creative dissertation must also submit samples of their creative writing (10 pages of poetry or 15–25 pages of fiction).
- Three confidential letters of reference that assess the applicant's potential contribution to the discipline.

All application materials may be requested from the department by telephone, e-mail or web site. If you require assistance in filling out the application, or if you have questions about the degree or application process, please contact the chair of graduate studies in English at (940) 565-2115.

Financial Assistance

Full-time students who meet all qualifications for both the doctoral program and for instructional positions will be offered employment as graders, academic assistants or teaching fellows in the Department of English, thus receiving financial support for a five-year period in the pursuit of the doctoral degree. Financial support will normally not be awarded beyond the fifth year of graduate studies. Students are not required to perform any instructional services if they do not want to receive this

form of financial aid. Part-time students will normally be employed elsewhere, but, if qualified, they are not precluded from performing instructional services at some time during their studies.

Scholarships may be awarded to incoming graduate students who show unusual promise as indicated by their application credentials. These will normally be one-year scholarships for students not yet eligible to be teaching fellows.

Residence

The student must meet the doctoral residence requirement described in the general section of this bulletin dealing with requirements for the doctoral degree.

Foreign Language Requirement

Students must demonstrate a reading knowledge of at least one foreign language other than his or her own native language. The student will work with his or her major adviser to decide what foreign language is most appropriate for his or her graduate program and scholarly interests. Some advisers may require additional foreign language work. The student's adviser may also set specific requirements based on individual and scholarly needs. The student may demonstrate reading knowledge of a single foreign language in any of the following ways: (1) by showing proof of completion of 12 hours (through the sophomore level) of a single foreign language at the undergraduate level or graduate level with a minimum GPA of 3.0 via transcript(s) or (2) by passing the appropriate competency test as administered by the Department of Foreign Languages and Literatures at UNT.

Admission to Candidacy

After admission to PhD study, a graduate student will be accepted for candidacy for the PhD after accomplishing all of the following:

1. successful completion of all required courses, including foundation and distribution requirements, and elective courses;
2. successful completion of foreign language requirements; and
3. successful completion of the PhD examinations.

Curriculum

All students in the doctoral program must complete 90 semester credit hours of graduate work beyond the bachelor's degree. Students must select a faculty adviser and determine a degree focus within the first 27 hours of course work. The student will focus in one or more of the following areas:

- Medieval literature
- Renaissance literature
- Restoration/18th-century literature
- 19th-century British literature
- 20th-century British literature
- American literature
- Contemporary literature
- Creative writing
- Poetics
- Persuasive and Technical Writing

Students will take courses in the following areas:

- Required courses (30 hours)
- Electives (36 hours)
- Directed research (12 hours)
- Dissertation (12 hours)

Required Courses (30 hours total)

Students will satisfy the required courses by taking foundation courses and distributed requirements. Students must take foundation courses within the first three terms/semesters.

Foundation Courses (12 hours)

- Scholarly and Critical Writing
- Studies in the Teaching of Composition
- Bibliography and Methods of Research in Literature
- Literary Criticism and Theory

Distributed Requirements (18 hours)

- 2 courses in British Literature, pre-1660
- 2 courses in British Literature, post-1660
- 1 course in American Literature, pre-1900
- 1 course in American Literature, post-1900

Electives (36 hours)

Students take 36 hours of elective courses (from within the Department of English). Students are limited to two Special Problems courses, except by permission of the chair of graduate studies in English and the student's major adviser.

Directed Research (12 hours)

The student must take 12 hours of Directed Research (ENGL 6941, 6942, and 6944). With permission of the student's major adviser and the chair of graduate studies in English, the student may take up to 6 hours of organized classes in lieu of Directed Research. The student may not enroll in Directed Research until the PhD examination and the foreign language requirements have been met.

Dissertation (12 hours)

The student must take 12 hours of dissertation (ENGL 6950). The student may not enroll in dissertation until the PhD examination, the foreign language requirement and the directed research requirements have been met.

PhD Qualifying Examination

The student must take the PhD qualifying examination during the last term/semester of organized course work. The PhD examination will be administered by the student's dissertation committee in either November or April.

The PhD examination may be taken twice. If the student fails the examination on both occasions, then permission for any retake of the examination must be granted by the graduate committee.

The student must pass the following:

- one four-hour written comprehensive examination in the primary area,
- one four-hour written examination in any other secondary area of the student's choice, and
- one two-hour oral examination.

The student must pass these examinations before being permitted to register for directed research and dissertation hours.

The student's major adviser and committee will determine the nature of the examinations and prepare and administer them. The student will be expected to have expert knowledge of the primary area and general comprehensive knowledge of the secondary area.

After the student passes the written comprehensive examinations in both the primary and the secondary area, the student will then take one two-hour oral examination. The oral examination will touch on all of the written exams, both in the primary and in the secondary area.

Dissertation Prospectus

Each student is required to provide an extended and detailed dissertation prospectus to his or her dissertation committee. The prospectus, developed while the student is enrolled for ENGL 6941 and/or 6942, must be turned in to the dissertation committee no later than the end of April of the fourth year.

The dissertation prospectus must be approved by all members of the student's dissertation committee. The approved prospectus, along with a prospectus cover sheet and approval form, must be turned in to the chair of graduate studies. The faculty committee that approves the prospectus must be the same as the dissertation committee. Any changes in the constitution of the dissertation committee must be approved by the chair of graduate studies. Students may not enroll for dissertation until the prospectus has been approved by the dissertation committee and turned in to the chair of graduate studies.

Dissertation Requirement

1. A dissertation is required of all candidates for the doctorate. The dissertation must be a work of original research and writing justifying the awarding of the doctoral degree. Students can enroll for dissertation credit only when
   - the dissertation prospectus has been approved by all members of the student's dissertation committee, and
   - the student has satisfied the foreign language requirement and the PhD examination requirement.

2. Students enrolled for dissertation credit must comply with the continuous enrollment policy set forth in appropriate sections of this bulletin.

3. The dissertation committee is composed of three faculty members. The dissertation will be directed by a qualified faculty member whose area of expertise is in the student's major area. Two other faculty members from the Department of English constitute the rest of the dissertation committee. Area advisers and the chair of graduate studies will assist students in the selection of the dissertation committee.

4. When the dissertation is completed and has received the preliminary approval of the dissertation committee, the dissertation director will schedule the final comprehensive examination (dissertation defense) and notify the chair of graduate studies in English and the dean of the Toulouse School of Graduate Studies of the date and time of the examination. The dissertation will be submitted to the chair of graduate studies in English only after this examination has been passed. After the approval of the chair of graduate studies in English has been secured, the dissertation will then be transmitted to the graduate dean's office and finally approved by the graduate dean.

5. Instructions for submitting the dissertation may be obtained from the graduate dean's office. Students should consult the Academic Calendar in the annual *Graduate Catalog* for deadlines.

Courses of Instruction

All Courses of Instruction are located in one section at the back of this catalog.

Course and Subject Guide

The "Course and Subject Guide," found in the Courses of Instruction section of this book, serves as a table of contents and provides quick access to subject areas and prefixes.

Department of Foreign Languages and Literatures

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The Department of Foreign Languages and Literatures offers graduate programs in the following areas:

- Master of Arts with majors in French and Spanish.

Graduate students may pursue minors in French or Spanish.

Graduate students have the opportunity to use the target language in their courses at UNT and can participate in the Study Abroad Program. French majors, through the French Co-op Program, have the opportunity to spend a year in France with a teaching position in English in Longuenesse or Tours. Summer study programs are also available at the University of Strasbourg for French, and in Valencía for Spanish.

French and Spanish Summer Institutes (summer MA program)

Following the immersion principle, every June the French and Spanish Summer Institutes offer two graduate courses over a four-week period divided into two two-week sessions. This program enables graduate students to earn an MA in French or Spanish over four summers of course work supplemented by additional courses taken during the fall or spring term/semester, transfer credits and/or study in France or Spain. All students may combine courses taken during the fall and spring terms/semesters with courses taken during the French or Spanish Summer Institute. Advanced undergraduate students may register for the French or Spanish Summer Institute and receive credits at the 4000 level.

Research

Research conducted by departmental faculty members in Spanish includes second-language acquisition, cultural studies, Spanish poetry, contemporary Spanish-American literature, Spanish literature of the Golden Age, Latino and Latin American theatre, literary theory and women's studies. Spanish literature of the 19th and 20th centuries is another area of interest. Faculty in the field of French specialize in second-language acquisition, culture and civilization, literature of the 16th, 18th, 19th and 20th centuries, literary theory, women's studies, and Québec. Research in German literature includes German and comparative literature of the Baroque and German literature of the 18th, 19th and 20th centuries.

Admission and Degree Requirements

A student must have completed at least 12 semester hours of advanced work in the field concerned to be admitted into the graduate program. Applicants are evaluated following a holistic review which includes several factors, none of which are given greater weight than any of the others: undergraduate GPA, GRE test scores, a 250-word statement in the target languages, a one-page curriculum vitae and completion of 12 hours of advanced undergraduate course work in the target language. Undergraduate students anticipating entrance into graduate work in French or Spanish should take the GRE in the final term/semester of their senior year. In the event that the examination has not been taken before application is made, the student should take it no later than the following administration.

The applicant must demonstrate a reading knowledge of a second foreign language. Completion of a course in the second language at the 2050 level or higher, with a grade of at least B, will be regarded as proof of adequate reading ability.

The applicant has the choice of the following programs: (a) 36 semester hours, including 6 hours of thesis; at least 24 hours of course work must be completed in the major; a minor of 6 hours is permitted; or (b) 36 hours of course work, without thesis; at least 30 hours must be earned in the major; a minor of 6 hours is permitted.

A master's degree candidate in French or Spanish must take a written comprehensive examination in the major field.

With the approval of the chair of the department, the master's thesis may be written in the foreign language (French or Spanish) of the student's field of graduate study.

Courses of Instruction

All Courses of Instruction are located in one section at the back of this catalog.

Course and Subject Guide

The "Course and Subject Guide," found in the Courses of Instruction section of this book, serves as a table of contents and provides quick access to subject areas and prefixes.

Department of Geography

Main Departmental Office
Environmental Education, Science and Technology Building, 210
P.O. Box 305279
Denton, TX 76203-5279
(940) 565-2091

Web site: *www.geog.unt.edu*

Paul Hudak, Chair

Graduate Faculty: Acevedo, Dong, Ferring, Hudak, Lyons, McGregor, Nagaoka, Oppong, Rice, Williams.

Students in the Department of Geography successfully prepare for active careers in diverse employment settings in business, government, research and teaching. The Master of Science degree with a major in applied geography allows students to develop their education and training in both physical and human geography, through a broad curriculum, research and teaching experience, and also through numerous internship opportunities with local corporations, water and land use agencies, and health care systems, as well as city, state and federal governments and agencies. The MS degree prepares graduates for mid-upper level entry positions as well as for pursuit of a doctoral degree in geography or an allied discipline. Formal interactions with the research and teaching faculties of environmental sciences and the Texas College of Osteopathic Medicine promote substantial crossover between disciplines for students in both programs. The master's degree is also earned by many students that teach or plan to teach at the primary or secondary level. Inclusion of UNT's archaeology curriculum in this department enables students to gain interdisciplinary training, with emphasis on geoarchaeology, zooarchaeology, spatial and quantitative analysis, and various techniques for dating or materials characterization.

Research

Faculty in the Department of Geography are engaged in research activities that cover a broad range of topics in physical and human geography, as well as archaeology. This diversity of research reflects the composition of our faculty. The department collaborates fully with the Institute of Applied Sciences, the Department of Mathematics, the Department of Computer Science and Engineering and the Department of Physics, among others, in interdisciplinary projects.

Research areas include medical geography and health care delivery systems, groundwater monitoring and remediation, solid waste disposal, water resources management, locational conflicts, urban/economic geography, geographic information systems, remote sensing and digital image processing, meteorology, environmental modeling, ecosystems management, coastal and fluvial geomorphology, soils geomorphology, climate modeling, Quaternary geology and paleoenvironments, geoarchaeology, environmental archaeology, island biogeography, zooarchaeology, spatial modeling and spatial/environmental aspects of recreation, cultural resources management and natural hazard assessment. In addition to research activities in the southern mid-continent region, students have recently participated in our faculty's research in South America, the Caribbean, New Zealand, Thailand, Portugal, Spain, Mexico, Ghana and the Republic of Georgia.

Recent support for research includes grants from the National Science Foundation, the Environmental Protection Agency, the U.S. Army Corps of Engineers, the Texas Natural Resources Information Service, the Texas Air Quality Control Board, the National Geographic Society and the Leakey Foundation.

The **Center for Spatial Analysis and Mapping (CSAM)** is housed in the Environmental Education, Science and Technology Building (EESAT). This center provides instructional and research support in the areas of geographic information systems (GIS), computer cartography, spatial analysis and environmental modeling. The facility serves undergraduate and graduate students majoring in geography and in environmental science. Beyond its immediate instructional and research mission, CSAM is envisioned as the facility to provide GIS support for institutional planning and facilities management at UNT. The department also collaborates with environmental sciences in the operation of the Center for Remote Sensing and Land Use Analysis for instruction and research.

The **Center for Environmental Archaeology** maintains fully equipped laboratories in archaeology, geoarchaeology and zooarchaeology. These facilities

include instrumentation for analysis of sediments, soils, petrographic thin sections, lithic and ceramic artifacts. The zooarchaeology laboratory houses more than 700 curated skeletons of recent vertebrates as well as large collections of Holocene and Pleistocene archaeological faunas. Extensive research includes current projects of Upper and Middle Paleolithic sites in Portugal and Ukraine, the 1.8 million year-old site of Dmanisi in the Republic of Georgia and numerous sites dealing with the human colonization of New Zealand.

Degree Program

The department offers a graduate program leading to the following degree:

- Master of Science with a major in applied geography.

Admission Requirements

Application for admission to the Toulouse School of Graduate Studies is made through the graduate school. Concurrently, a letter of intent should be sent directly to the Department of Geography's graduate adviser. This letter should briefly summarize the applicant's background, specific interests in the field of geography and future career plans. Three letters of recommendation also are required.

Applicants normally should have the equivalent of an undergraduate major in geography from an accredited university with an overall undergraduate grade point average (GPA) of at least 2.8 or a 3.0 GPA during the last 60 undergraduate semester hours. The undergraduate degree should include exposure to basic quantitative analysis techniques in geography. Students whose undergraduate major is not geography may be required to take undergraduate leveling courses. Total leveling course requirements will not exceed 9 semester credit hours. In addition, the student's GRE score will be evaluated as part of the admission process. Contact the department or the Toulouse School of Graduate Studies for information concerning acceptable admission test scores.

Degree Programs

The Master of Science degree with a major in applied geography has a minimum requirement of 36 hours of academic credit, which includes either 6 hours for thesis preparation, or 6–9 hours of individual study and/or internships for non-thesis options. Students using the thesis option must defend their completed thesis, while those in the non-thesis option must pass a final examination. All students must take a 1-hour graduate seminar and two 3-hour research techniques courses: GEOG 5110, Research Design and Geographic Applications, and GEOG 5190, Advanced Quantitative Techniques. Also, students must complete 6 hours of work in a cognate field unless they elect to follow the environmental archaeology track. For the remaining course work, selections may be made from any or all of six topical areas: geomorphology, geographic information systems (GIS) and techniques, water resources, urban environments, medical geography and archaeology. Individual student's degree plans and the composition of the student's committee are defined in the first term/semester of attendance in consultation with the student's major professor and the graduate adviser. Final written examinations are taken at the end of course work, including internships, for non-thesis students. An oral defense of the thesis is administered after the major professor and the thesis committee members have approved the written version of the thesis. As an option, students may elect to follow one of the specific degree tracks currently offered: applied geomorphology, environmental archaeology, urban environments management, water resources management or applied GIS.

Applied Geomorphology

This track prepares geography students for careers or further education in a wide variety of areas concerned with processes that shape the surface of the earth. Applied geomorphology emphasizes geomorphological processes that are of societal significance, including hazards such as flooding, expansive soils, landslides and coastal erosion. This track under the Master of Science with a major in Applied Geography enables students to structure their degree plans around conceptual and technical aspects of applied geomorphology. The track meets all existing requirements for the degree including required courses in research design, quantitative techniques and a cognate field. Students completing this track may find employment with government research and regulatory agencies, municipalities, planning organizations, water supply districts or environmental consulting firms.

Environmental Archaeology

Archaeology faculty in the geography department, in cooperation with the graduate program in anthropology, direct graduate students in pursuit of either the MS in geography or the MS in interdisciplinary studies. The focus of this program is to give students a strong foundation in selected areas of research expertise that will prepare them for entry into research positions or doctoral programs in archaeology. Two principal areas of training are geoarchaeology and zooarchaeology, which derive strength from the faculty and fine laboratory/collections resources in the Center for Environmental Archaeology. In addition to

core requirements in geoarchaeology or zooarchaeology, students complete two areas of specialization selected from the following areas: GIS and remote sensing, spatial and quantitative analysis, instrumental techniques (e.g., SEM, EDX, PIXE, stable isotopes, petrography), or zoology and ecology.

Urban Environments Management

This degree track prepares students to assume a vital role within the structure of a city government, coordinating the activities of various city departments related to environmental legislation. In addition to the normal requirements, students select courses from content areas including urban environments, environmental science, city government structure and environmental law and policy. Each student completes an internship with a local city, using that experience as a focus for preparation of the thesis. This track has been developed in response to the increasing need for persons to coordinate different programs in city government, to liaison with governmental agencies, to interact with contracted environmental engineers and to bring a philosophy of sustainable environments to the planning process.

Water Resources Management

This track prepares geography students to assume active roles in addressing the critical issues of water supplies and water quality. Students follow a curriculum balanced among technical, scientific and political aspects of water resources management, preparing them to complete either a thesis or an internship. Courses are selected from the following topical areas: techniques, geography/geology, environmental science and environmental policy. Students completing this degree track gain positions with local and regional governments, federal and state regulatory agencies, engineering firms and regional water districts.

Applied Geographic Information Systems

This track prepares students to meet the growing demand for GIS professionals. But rather than a strictly technical preparation, students acquire the foundation in applied geography that qualifies them to play vital roles in planning, policy and implementation in chosen areas such as urban geography, economic/business development, environmental science and medical geography. Courses for this track are selected from the following groups: GIS technology, GIS applications, topics/cognate fields, real estate/marketing, public health administration, environmental science and applied economics.

Certification in GIS

A five-course sequence fulfills the requirements for certification in GIS. These courses are Introduction to GIS, Intermediate GIS, Advanced GIS and two applications-based electives from a list of geography and computer science courses. This certification may be acquired within the MS in geography, but is also open to graduate students in other programs, non-degree seeking students, or outside teachers or professionals who wish to add GIS capabilities to their present careers.

Financial Assistance

The Department of Geography extends some form of financial assistance to the majority of our graduate students. Our substantial enrollments in undergraduate introductory classes in geography, geology and archaeology support several teaching assistants. In addition, we offer students research assistantships and departmental scholarships. Many of these forms of assistance qualify students for an out-of-state tuition waiver, significantly reducing the student's education costs. The department also works closely with the office of student financial assistance and the international studies office to help students gain scholarships, student loans and other forms of assistance.

Courses of Instruction

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Course and Subject Guide

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Department of History

Main Departmental Office
Wooten Hall, 225
P.O. Box 310650
Denton, TX 76203-0650
(940) 565-2288
Fax: (940) 369-8838

Web site: *www.hist.unt.edu*

Adrian R. Lewis, Chair

Graduate Faculty: Calderon, Campbell, Chet, Eaton, Fuhrmann, Golden, Hagler, Hilliard, Hurley, Kamman, Lewis, Lowe, Marcello, McCaslin, Mierzejewski, Morris, Moye, Navarro, Paz, Seligmann, Smith, Stern, Stockdale, Tanner, Turner, Wawro.

The Department of History offers graduate programs leading to the following degrees:

- Master of Arts (requiring one foreign language) and
- Master of Science, both with a major in history; and
- Doctor of Philosophy with a major in history.

Concentrations are available at the master's level in United States history and European history (since 1400).

Concentrations are available at the doctoral level in United States history and European history (since 1400).

Course offerings include a wide variety of classes on the history of the United States; ancient, medieval and modern Europe; Latin America; East Asia; the Middle East; Africa; and other topics. The department has special strengths in Texas history and military history.

The UNT library has a large collection of national newspapers, personal papers and other materials for the American colonial and early national periods, and for the Civil War and Reconstruction era. Also available are microfilm copies of presidential papers and those of other prominent Americans, such as Henry L. Stimson. A large microfilm collection of State Department materials includes diplomatic dispatches to 1906, the decimal file for all major countries, 1910 to 1929, and some of the decimal file beyond 1929. Library holdings include Texas newspapers, county tax rolls and U.S. census records. The library contains a large collection of Civil War soldiers' records. In addition, researchers have easy access to regional archival depositories, among them the Southwest Branch of the National Archives in Fort Worth.

Other important resources in the collection include German Foreign Ministry documents; *British and Foreign State Papers*; British *Parliamentary Debates*; British Cabinet documents; proceedings of the German Bundestag, Bundesrat, and Bundeskabinett; debates of the French National Assembly; 17th-century British pamphlets and letters; and various source materials on medieval history.

Materials related to World War II include a large oral history collection on prisoners of war, Pearl Harbor survivors and Holocaust survivors. Other oral history collections include materials on African Americans in Texas and on Texas political and business leaders.

The UNT library has been a U.S. government depository since 1948. The library also has many back issues of U.S. government documents. The Department of History also houses its own extensive collection of books and films, the Kingsbury-Thomason Library.

Research

The research interests of the history faculty cover a broad range of United States, European, Latin American, African and Asian topics. Additional interests include military history, women's history, Great Britain, early modern and modern France, and the Italian Renaissance. History faculty members have published numerous books on such topics as Texas history, the U.S. South, the Civil War, Native Americans, 20th-century United States, oral history, World War II, England, France, Italy, Germany, and the history of science.

Center for the Study of Military History

The Department of History is home to the Center for the Study of Military History, which houses the editorial office of the journal *Military History of the West*. The center also coordinates activities and events at North Texas related to the study of military history, including the annual Military History Seminar. For more information, please contact the Director of the Center for the Study of Military History at (940) 565-2288. The Department of History is also the home of the Major General Olinto Mark Barsanti Chair in Military History, currently held by Professor Geoffrey Wawro.

Admission Requirements

1. All general admission requirements of the Toulouse School of Graduate Studies, as outlined elsewhere in this bulletin, must be fulfilled.

2. **MA/MS degree:** The Department of History employs a holistic review process. Applicants are evaluated on their entire academic history. However, it is recommended that the applicant score at the

50th percentile or higher on the verbal portion of the Graduate Record Examination (GRE) and score either (1) at the 40th percentile or higher on either the quantitative or (2) a 4 or higher (on a scale of 1 to 6) on the analytical writing portion, have a bachelor's degree and 24 hours of history credits from an accredited college or university, have a cumulative grade-point average (GPA) of 3.0 on a four-point scale for all undergraduate work or for the last 60 hours of undergraduate work, submit a statement of purpose and interests, provide two letters of recommendation, and have met all other university requirements.

3. **PhD degree:** Applicants are evaluated on their entire academic history; however, it is recommended that applicants score at the 70th percentile or higher on the verbal portion of the GRE and score either (1) at the 40th percentile or higher on either the quantitative portion or (2) a 4 or higher (on a scale of 1 to 6) on the analytical writing portion of the GRE, submit a statement of his or her purpose in seeking the doctorate in history, submit a formal paper (other than the thesis) from his or her master's work, provide three letters of recommendation from persons familiar with the applicant's post-secondary academic record, have a master's degree with a thesis and have met all other university requirements. No more than 12 hours accumulated above the requirements for the MA and MS programs may be transferred into the doctoral program.

Continuing Requirements

1. MA students: To enroll for a seventh course, a master's degree student must have earned a GPA in history courses of 3.25, and the student must maintain that average, exclusive of I and PR grades, each term/semester until the degree is awarded. If the student fails to maintain the minimum required average, he or she will be dropped from the degree program.

2. PhD students:

   a. To enroll for a seventh course, a doctoral degree student must have earned a GPA in history courses of 3.5, and the student must maintain that average, exclusive of I and PR grades, each term/semester until the degree is awarded. If the student fails to maintain the minimum required average, he or she will be dropped from the degree program.

   b. The student must also fulfill the residency requirement outlined in the "Doctoral Degree Requirements" section in this bulletin.

   c. To remain in the doctoral program, the student must satisfy existing university regulations concerning completion of the doctoral dissertation.

Degree Programs

Master of Arts, Master of Science

Note: students earning a master's degree in the UNT history department must follow the thesis option to qualify for admission in the department's doctoral program.

Major in History, Thesis Option – 31 Hours

1. A graduate major in history consists of 25 hours of graduate work in history (including 1 hour of historical bibliography and at least two research seminars) and a 6-hour thesis. The 25 classroom hours may be selected from any courses offered by the department; the 6-hour thesis may be written on any topic approved by the student's advisory committee.

2. The student may substitute 6 hours in a related field approved by the chair of his or her committee for 6 hours of graduate course work in history.

3. A candidate for this degree must successfully complete an oral examination on the course work and the thesis.

Major in History, Non-Thesis Option – 31 Hours

The non-thesis option is regarded as a terminal degree by the UNT history department.

1. A student selecting this option must take any two research seminars in history and 1 hour of historical bibliography. The remaining 24 hours may be all in history or may include a minor up to 6 hours in a related field approved by the department chair.

2. A candidate for this degree must successfully complete an oral examination on the course work.

Doctor of Philosophy

Degree Requirements

The Doctor of Philosophy with a major in history is offered in two fields: United States and Europe (since 1400). All students pursuing the PhD in history will be examined for four areas of history, at least two of which must be within their primary concentration, United States or Europe. Students pursuing the PhD in United States history will be examined in at least one non-United-States area; students pursuing the PhD in European history will be examined in at least one non-European area. The areas in history must be chosen from a list provided by the department. The student must have a minimum of 36 classroom hours of graduate courses plus research and dissertation hours. A minimum of four research seminar courses in history and 3 hours in historiography are required. If an area outside history would enhance the student's program or career plans, the student's committee may allow the

outside area with the permission of the department chair. Completion of a specific number of graduate hours does not automatically make one eligible for a degree. The student must show proficiency by satisfactory performance on written and oral examinations, by completion of the language requirement and by completion of an acceptable dissertation. Any student who fails to register for two consecutive long terms/semesters in classes at UNT will be required to reapply for admission to the history doctoral program.

The program and degree plan of each doctoral student will be planned by the student and his or her advisory committee. The student will initiate a request to establish an advisory committee through the office of the graduate adviser who, in consultation with the student and with the approval of the department chair, will select a major professor from the approved list. The person appointed will serve as chair of the student's committee. The major professor, in consultation with the student, will select other members of the committee. The student's degree plan and the composition of the advisory committee must be certified by the graduate adviser and approved by the chair of the department and the dean of the Toulouse School of Graduate Studies.

The committee will advise the student on program planning, arrange for all departmental examinations, approve in conjunction with the student the dissertation topic and judge the completed dissertation as a piece of original research justifying the awarding of the degree.

Doctoral committees in the Department of History must include a university graduate faculty member who is either Category I, II or III and whose principal faculty appointment is in a department other than the history department. The student's major professor and the student will work together to select a university member whose expertise will contribute meaningfully to the dissertation.

Foreign Language Requirement

The student must demonstrate a reading knowledge of one foreign language. The language requirement must be completed prior to taking the qualifying examinations.

Admission to Candidacy

The qualifying examinations will be taken when course work, other than research and dissertation, has been completed. These examinations, arranged by the advisory committee, will consist of written examinations and oral examinations covering four areas. The successful completion of these examinations is a prerequisite to admission to candidacy for the degree.

Admission to candidacy is granted by the dean of the Toulouse School of Graduate Studies upon recommendation of the advisory committee and the department chair, based upon the academic record of the student, approval of a dissertation topic and successful completion of language requirements and qualifying examinations.

Research and Dissertation

The doctoral student will submit a dissertation that is a significant contribution to the knowledge of history. Completion of the dissertation requires original and independent research in the field of specialization. The final oral examination will be primarily a defense of the completed dissertation.

Scholarships

The Department of History awards several scholarships for graduate students. Eligibility requirements vary from one grant to another, and amounts vary from year to year. Graduate students may also apply for various types of work within the department: for example, teaching assistantships, teaching fellowships, research assistantships and positions in the department's History Help Center and in the department's own Kingsbury-Thomason Library. Applications for all financial aid administered by the department are available from the main office of the department [Wooten Hall, Room 225, (940) 565-2288]. Application deadline is March 1 of each year.

Courses of Instruction

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Course and Subject Guide

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Department of Journalism

Main Departmental Office
General Academic Building, 102
P.O. Box 305280
Denton, TX 76203-5280
(940) 565-2205

Web site: *www.jour.unt.edu*

Susan C. Zavoina, Chair

Graduate Faculty: Albright, An, Broyles, Busby, Everbach, Lambiase, Land, Mueller, Wells, Zavoina.

The Department of Journalism offers graduate programs leading to the following degrees:

- Master of Arts with a major in journalism, and
- Master of Journalism.

Frank W. Mayborn Graduate Institute of Journalism

Main Office
General Academic Building, 207
P.O. Box 311460
Denton, TX 76203-1460
(940) 565-4564

Web site: *mayborninstitute.unt.edu*

Mitch Land, Director

Graduate work in the Mayborn Institute is designed to prepare students with lifetime communication and intellectual skills for successful careers in the professions represented by the department's graduate degree programs. The Mayborn Institute also prepares students who wish to pursue academic careers in higher education. This nationally accredited program offers state-of-the-art technological training and support as well as research and study opportunities in news, advertising, public relations, photojournalism and electronic news. Some web-based courses are now available.

Journalism graduate students are required to pass a written comprehensive examination over journalism courses taken. The examination should be scheduled near the end of the student's program. Journalism graduate students who write a thesis will defend that thesis in an oral examination with thesis committee members.

Graduate programs lead to the following degrees:

- Master of Arts with a major in journalism, and
- Master of Journalism.

Research

Areas of research interest in the department include the impact of new technology on journalism and mass communication, the importance of ethics in media, the use of computers by students in professional preparation and to improve writing and information gathering skills. Research also is conducted on curriculum studies for journalism education and on defining the outcomes of journalism education. Other topics of research interest are sexism and racism in media, editorial policies of student newspapers, newspaper design and production, and international communication issues.

Admission Requirements

Application for admission should originate in the office of the dean of the Toulouse School of Graduate Studies. The applicant must hold a bachelor's degree from an approved college or university.

A satisfactory score on the Graduate Record Examination (GRE) must be submitted before formal admission to the graduate program in journalism. If admitted provisionally, a student will not be permitted to enroll in any courses for credit toward the master's degree after the first term/semester until an acceptable score is submitted and approved. A portfolio must also be submitted to the Mayborn Institute. Contact the Institute for details. International students may substitute successful completion of the Graduate Preparation Course for the verbal portion of the GRE. Non-native speakers of English also must submit satisfactory scores on the TOEFL. The graduate director may make an exception in an unusual case.

Degree Programs

Master of Arts

General requirements for the Master of Arts with a major in journalism are the same as those listed in the Master's Degree Requirements section of this catalog. The MA candidate whose undergraduate degree is not in journalism may be required to take up to 12 hours of undergraduate courses in journalism as approved by the graduate program director.

The MA candidate in journalism must complete a minimum of 36 semester hours, including a thesis of 6 hours. A minor is not required, but up to 12 hours may be taken in a minor field, or the 12 hours may be divided between two minor fields. The MA requires foreign language competency. Students should meet with their adviser after completing 12 hours to select a thesis chair and committee and to register for the comprehensive exam. Comprehensive exams must be passed before registering for thesis hours.

JOUR 5040, Media Studies and Theories, should be taken in the first term/semester of study in the journalism graduate program.

Required courses for the MA follow.

- JOUR 5040, Media Studies and Theories
- JOUR 5050, Readings in Mass Communication
- JOUR 5250, Research Methods I (Quantitative)
- JOUR 5260, Research Methods II (Qualitative)
- JOUR 5950, Master's Thesis (6 hours)

Master of Journalism

The MJ candidate whose undergraduate degree is not in journalism may be required to take up to 12 hours of undergraduate courses in journalism as approved by the graduate program director. The MJ degree has no foreign language requirement, and the 6-hour thesis is optional, but the candidate must complete a minimum of 36 hours of graduate work. A minor of at least 6 hours in another field is required. If as many as 12 hours of minor work are done, they may be divided equally between two approved fields.

JOUR 5040, Media Studies and Theories, must be taken in the first term/semester of study in the journalism graduate program.

Required journalism courses for the MJ follow.

- JOUR 5040, Media Studies and Theories
- JOUR 5050, Readings in Mass Communication
- JOUR 5250, Research Methods I (Quantitative)
- JOUR 5260, Research Methods II (Qualitative)

Minor Fields

Recommended minor fields for the MJ are English, history, information science, political science, radio/television/film, sociology, economics and business administration. A minor is optional for the MA.

Graduate Academic Certificate

Religion in Media and Culture

The Mayborn Graduate Institute of Journalism offers a graduate academic certificate titled religion in media and culture. This program consists of a focus of study examining religion and spirituality as it is expressed and perceived within culture and society generally and through mass-mediated communication specifically. The certification requires 15 hours of course work drawing from journalism and assigned readings in religious studies and the sociology of religion.

Admission Requirements (including prerequisites or degree)

Graduate standing; demonstrate competency in reporting (or may take JOUR 5010 as a prerequisite).

Course Requirements

- JOUR 5200, Public Opinion and Propaganda
- JOUR 5310, Media Ethics
- JOUR 5360, Religion Journalism
- JOUR 5380, Religion in Media and Culture
- JOUR 5900, Advanced Problems in Journalism (assigned readings in religion and society)

NT Daily

The award winning *North Texas Daily*, UNT's student newspaper, provides practical experience for students in all sequences of the Department of Journalism. The Student Publications Committee selects the editor each term/semester, and staff jobs are open to any UNT student. The *Daily* is published four days a week in the fall and spring terms/semesters and once a week in the summer. The *Daily* has been providing news and entertainment to UNT students since 1948. For more information, contact the *Daily*'s adviser at (940) 565-2205, or visit the *Daily*'s web site (*www.ntdaily.com*).

Courses of Instruction

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Course and Subject Guide

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Department of Mathematics

Main Departmental Office
General Academic Building, 435
P.O. Box 311430
Denton, TX 76203-1430

(940) 565-2155
Fax: (940) 565-4805

Web site: *www.math.unt.edu*

Neal Brand, Chair

Graduate Faculty: Allaart, Allen, Anghel, Bator, Betelu, Brand, Brozovic, Cherry, Clark, Conley, Douglass, Gao, Iaia, Jackson, Johnson, Kallman, Kung, Lewis, Liu, Mauldin, Monticino, Neuberger, Quintanilla, Richter, Sari, Shepler, Urbanski, Zamboni.

Opportunities for supervised research are available in a variety of areas involving pure and applied mathematics.

Students who graduate with degrees in mathematics are flexible and adaptable in the workplace

and readily obtain jobs with high-technology companies and in business, industry, government and education. Salaries and working conditions are comparable with those of engineers and computer scientists.

Research

Faculty and students actively pursue both basic and applied research in mathematics from traditional areas of algebra, analysis, topology, probability and foundations to new and applied topics such as chaos theory, dynamical systems, image processing and stochastic differential equations.

Faculty research is supported by federal and private grants. Many of these grants provide research support for graduate students.

The library collection in the mathematical sciences is one of the nation's finest, with more than 18,000 volumes, and many are available electronically. Students and faculty have access to library resources via Internet from their offices.

Scholarships and Financial Support

Graduate students usually support their study by working as teaching fellows for the department. Teaching fellows are paid competitive stipends.

Work also is available as teaching assistants and math lab tutors, and the department has funds available for research assistants.

Contact the graduate adviser for complete details and for information about financial support.

Admission Requirements

Application for admission to the Toulouse School of Graduate Studies is made through the office of the dean of the School of Graduate Studies. The applicant should have the equivalent of an undergraduate major in mathematics at this institution. Deficiencies in this respect will be evaluated and must be remedied as a condition of final admission. An acceptable score on the GRE or GMAT is required. Contact the department or the Toulouse School of Graduate Studies concerning information about standardized admission test requirements.

Degree Programs

The Department of Mathematics offers graduate programs leading to the following degrees:

- Master of Science,
- Master of Arts, and
- Doctor of Philosophy, all with a major in mathematics.

All graduate students will consult with the graduate adviser regarding a program of study. Graduate students are evaluated annually regarding progress toward graduation. Those not making satisfactory progress will be dropped from the mathematics program. Appeals for reinstatement may be made to the department's graduate affairs committee.

Master of Arts

The Master of Arts degree with a major in mathematics is designed primarily for those students who plan to pursue the PhD degree and who plan careers in college teaching, business or industry. The program consists of 24 hours of approved course work (numbered 5000 or above) and a thesis carrying 6 hours of credit. A student in this program normally will take five of these six courses: MATH 5310, 5320, 5520, 5530, 5610 and 5620. A minor of 6 semester hours may be elected by the student with consent of the department. A final oral examination is scheduled after completion of the thesis.

Candidates for the MA degree must demonstrate proficiency in a foreign language (normally French, German, Spanish or Russian). See the Admission section of this catalog for further details.

Master of Science

The Master of Science degree with a major in mathematics is designed for those students who wish to develop a high level of competence in mathematical theory and technique in order to apply this knowledge in fields outside mathematics. The program consists of 36 hours of approved course work, possibly including a minor of up to 9 hours in a field outside mathematics. The student normally will take five of these six courses: MATH 5310, 5320, 5520, 5530, 5610 and 5620.

Candidates must demonstrate a proficiency in computer programming equivalent to that acquired in a 6-hour introductory course. A final examination normally will be scheduled during the final term/semester of the student's course work. A thesis is optional.

Doctor of Philosophy

The Doctor of Philosophy degree is awarded for superior accomplishment, the attainment of a high level of scholarship and the demonstrated ability, through independent study and research, to carry out an original investigation and present the results of such investigation.

Course Requirements

Until the student has selected a major professor, the graduate adviser will assist in planning the doctoral program. The program will be designed to provide the student with competence in several major areas of mathematics and to provide for intensive study and research in the area of specialization. The

student will be expected to complete approximately 90 hours of graduate work in mathematics beyond the bachelor's degree, of which about half should be in courses numbered above 6000. Included in this work, the student will be expected to take (or previously have taken the equivalent of) the following core sequences: MATH 5310-5320, 5410-5420, 5520-5530 and 5610-5620. In addition, the student is required to take at least two 6000-level courses in each of the areas of algebra, analysis and topology.

Foreign Language Requirement

PhD candidates must demonstrate proficiency in a foreign language approved by the department (normally chosen from French, German, Spanish and Russian). See the Doctoral Degree Requirements section of this catalog for additional information.

Qualifying Examinations

Before enrolling in the dissertation seminar, the student must pass qualifying examinations over two areas chosen from algebra, topology, real analysis and complex analysis. The doctoral advisory committee is appointed upon successful completion of the qualifying examinations.

Dissertation and Final Examination

The candidate must submit a dissertation exhibiting independent research on a topic approved by the doctoral committee. After the completion of the dissertation, a final comprehensive oral examination that will be primarily a defense of the dissertation will be given.

Courses of Instruction

All Courses of Instruction are located in one section at the back of this catalog.

Course and Subject Guide

The "Course and Subject Guide," found in the Courses of Instruction section of this book, serves as a table of contents and provides quick access to subject areas and prefixes.

Department of Philosophy and Religion Studies

Main Departmental Office
Environmental Education, Science and Technology Building, 225
P.O. Box 310920
Denton, TX 76203-0920
(940) 565-2266

Web site: *www.phil.unt.edu*
E-mail: philosophy@unt.edu

Robert Frodeman, Chair

Graduate Faculty: Barnhart, Callicott, Frodeman, Gunter, Hargrove, James, Kaplan, Klaver, Rozzi, Yaffe.

The Department of Philosophy and Religion Studies is the leading graduate program nationally and internationally in environmental ethics and environmental philosophy. The department offers the following degrees:

- Master of Arts with a major in philosophy
- Doctor of Philosophy with a major in philosophy.

The master's degree is appropriate for students wishing to develop master's-level expertise in philosophy before pursuing doctoral studies in philosophy or related fields. It also provides an excellent background for students planning careers in law. A non-thesis option is available for students pursuing non-academic career opportunities. Because this option can be completed in slightly more than a year, it provides professionals with the opportunity to develop expertise in philosophy during one-year leaves of absence from their jobs.

Graduate courses in philosophy may also be taken as part of the Master of Science in Interdisciplinary Studies through the Center for Interdisciplinary Graduate Studies of the Toulouse School of Graduate Studies. This program permits students, in close consultation with a faculty adviser, to create their own degree plans, which involve study in three or more related areas. This degree can be completed in one year including summer.

Because of its high concentration of specialists in the field of environmental ethics, the department offers humanists, scientists and professionals unique opportunities for postdoctoral work and professional development either through independent study and research or organized course work.

Philosophy courses also may be taken as a minor on the master's degree in other disciplines and as a

minor or supporting work on the doctorate. Philosophy department faculty participate in the Faculty of Environmental Ethics, a universitywide group within the Center for Interdisciplinary Graduate Studies. See the Toulouse School of Graduate Studies section for more information about this faculty and its research and instructional activities.

The doctoral program in philosophy at the University of North Texas is a cooperative program between UNT and the University of Texas at Arlington, drawing upon the expertise of the faculty of both institutions. Students apply for admission to the PhD program through the degree granting institution, UNT. Upon admission, students are able to register for graduate courses at either participating institution and to make use of the academic resources available at both institutions. Students are required to complete a minimum of 15 graduate semester credit hours at each participating institution.

Career opportunities for students who successfully complete the UNT/UTA PhD in philosophy and religion studies are diverse. Students interested in specializing in environmental philosophy and ethics will be well positioned to find jobs in academe as demand for specialists in this exciting and expanding new subfield of philosophy increases. We expect that job-seeking students completing a more traditional course of study in philosophy and religion studies can find either academic or nonacademic employment commensurate with their qualifications; those who are already employed in, for example, the religious vocations may enhance their skills and education.

For detailed information about the graduate program, visit *www.phil.unt.edu/programs/graduate*.

Research

Research in the department includes methods and philosophical implications of the social and natural sciences, phenomenology, literature, aesthetics, philosophy of religion and biblical studies, philosophy of mind and philosophical psychology, philosophy of education, metamathematics and philosophy of mathematics, philosophy of ecology, philosophy of law and political philosophy, and history of philosophy. The major thrust of the department is environmental ethics and environmental philosophy.

Scholarships and Financial Aid

Graduate teaching assistantships and fellowships are available from the department. To be eligible, students must have the equivalent of an undergraduate degree in philosophy. The Department of Philosophy and Religion Studies offers admission to its graduate programs for fall term/semester only. Complete application materials must be received by February 1 each year for admission to the following fall term/semester. Letters of recommendation (two for the master's program, three for the PhD program), a statement of purpose, and a writing sample are required. Students interested in teaching assistantships and fellowships must mention their interest in their statements of purpose. All teaching assistants and teaching fellows are eligible to enroll on an in-state basis.

Because the graduate degree program in the department is recognized as a unique program by the Academic Common Market, students from 14 southern states may enroll on an in-state tuition basis.

A $500 fellowship is provided to one student each term/semester by the Richardson Environmental Action League, a nonprofit recycling organization in Richardson, Texas. To be eligible a student must have completed 15 semester credit hours.

Two $1,000 graduate support awards are available normally to students applying for graduate support.

Admission Requirements

Application for admission to the Toulouse School of Graduate Studies is made through the graduate school. At the same time, a statement of purpose should be sent directly to the Department of Philosophy and Religion Studies along with a writing sample and letters of recommendation (at least two for the MA program and at least three for the PhD program). The statement of purpose should briefly summarize the applicant's background, specific interests in the field of environmental ethics and future career plans. The Department of Philosophy and Religion Studies offers admission to its graduate programs for fall term/semester only. Complete application materials must be received by February 1 each year for admission to the following fall term/semester.

Master's applicants normally should have the equivalent of an undergraduate major in philosophy at this institution, while PhD applicants should have the equivalent of an undergraduate degree and a master's degree in philosophy or a related field. Deficiencies will be evaluated on an individual basis. All students seeking admission to the graduate philosophy program are required to take a standardized admission test (e.g., GRE, GMAT or LSAT). For standardized admission test and additional admission requirements, contact the academic program or the Toulouse School of Graduate Studies.

Degree Programs

Master of Arts

Two options exist for completing the Master of Arts with a major in philosophy and a concentration in environmental ethics: thesis and non-thesis.

For the thesis option, the student takes 24 semester credit hours of approved course work and a thesis carrying 6 hours of credit. The student will normally take a minimum of six courses in philosophy. Six semester credit hours in supporting fields may be elected by the student with the consent of the department. An oral examination is scheduled after the completion of the thesis.

The non-thesis option consists of 36 semester credit hours. The student will normally take a minimum of six courses in philosophy. A 9-semester-credit-hour minor in a supporting field is required. Nine additional semester hours may be elected by the student in philosophy or in one or more supporting fields. The examiners at the oral examination will include a faculty member representing the minor field and, at the option of the department, one or more representatives of other supporting fields.

Students pursuing either option are expected to complete one course in environmental philosophy, either PHIL 5450, 5451 or 5700. Students must also take one graduate course in environmental science.

Candidates must demonstrate proficiency in a foreign language. The language will normally be French or German, unless another language is specifically required for the student's research for the thesis. See the Master's Degree Requirements section of this catalog for further details.

For information on the Master of Science with a major in interdisciplinary studies, see the Toulouse School of Graduate Studies section of this catalog.

Doctor of Philosophy

For admission into the PhD program, prospective students must simultaneously meet the following requirements:

- The applicant must hold a bachelor's degree or its equivalent from a regionally accredited college or university.
- The applicant should have a master's degree in philosophy or a related field or be prepared to complete such a degree prior to completing the PhD in philosophy. (Students with master's degrees in fields other than philosophy are welcome to apply. As appropriate, such students will be required to take up to 18 hours of graduate work in philosophy as foundational background for acceptance in the program.)
- The applicant must have satisfactory academic standing at the previous institution attended and have at least a 3.0 GPA on the last 60 undergraduate semester hours of work prior to receiving the bachelor's degree or a 2.8 GPA on all undergraduate work to be considered for unconditional admission. Applicants who have already completed a master's degree must have at least a 3.4 GPA on the master's or meet the undergraduate GPA standards as listed to be admitted unconditionally for doctoral study.
- Students seeking the PhD in philosophy are required to submit satisfactory scores on the Graduate Record Examination (GRE) or another appropriate standardized examination.
- Previous academic performance must demonstrate the potential for graduate work in philosophy.
- An applicant whose first language is not English must demonstrate proficiency in oral and written English prior to being admitted.
- The applicant must, at a minimum, meet the requirements for acceptance into the Toulouse School of Graduate Studies at UNT.

In addition to meeting all of the requirements above, students applying for admission to the cooperative doctoral program in philosophy must submit three letters of recommendation, a writing sample representative of their best academic work in the field, and a "statement of purpose" describing both their reasons for pursuing doctoral work in philosophy and their specific areas of academic interest (e.g., sub-disciplinary areas of interest within the field).

Information on requirements for the PhD with a major in philosophy is available from the department and online at *www.phil.unt.edu/programs/graduate/phd.*

The Center for Environmental Philosophy

Eugene C. Hargrove, Director

The Center for Environmental Philosophy encourages and supports workshops, conferences and other special projects, including postdoctoral research in the field of environmental ethics. Activities currently include the publication of *Environmental Ethics: An Interdisciplinary Journal Dedicated to the Philosophical Aspects of Environmental Problems,* which is now in its 29th year of publication; Environmental Ethics Books, a reprint series of important books dealing with environmental ethics and philosophy; and annual workshops on college and university curricula development and on nature interpretation. National research conferences focusing on selected topics in environmental ethics are held on an irregular basis.

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Department of Physics

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Web site: *www.phys.unt.edu*

Floyd D. McDaniel, Chair

Graduate Faculty: Deering, Duggan, Grigolini, Hu, Kobe, Kowalski, Krokhin, Littler, Matteson, McDaniel, Mueller, Neogi, Ordonez, Perez, Quintanilla, Roberts, Shiner, Weathers.

Students in the Department of Physics have the opportunity to obtain training with state-of-the-art equipment in new and modern research laboratories in areas of interest to the scientific and industrial communities, particularly those involved in microelectronics, semiconductors, applications of accelerators, lasers and modern computational methods. Opportunities are available to develop highly marketable skills in modern basic and applied physics as well as close interactions with regional industries.

Research

The physics department is conducting research in solid state, semiconductor and polymer physics; atomic, molecular and applied nuclear physics; accelerator based materials physics and nuclear magnetic resonance; and theoretical physics in quantum, statistical and computational physics and non-linear dynamics, including applications to biomedical phenomena.

The condensed matter, molecular and atomic physics programs include studies of energy levels, lifetimes, scattering mechanisms, transition rates, dissipative responses and interaction of light with matter. Housed in the Physics Building, the General Academic Building and the Science Research Building, the laboratories associated with these programs contain continuous CO and CO_2 and far infrared lasers. Low temperature and high magnetic field facilities also are located in these laboratories. Current semiconductor projects include magneto-optic interactions, two-photon spectroscopy and the study of artificially structured materials. Field emission of diamond and microemitters are being investigated.

In nuclear magnetic resonance, high-resolution multipulse methods are used to study interactions in solids. A prime interest in theoretical physics lies in applying quantum theory to many-particle systems. Mathematical problems involving Green's functions, Feynman diagrams, canonical transformations and gauge theory are being investigated. These and other methods are being applied to solids, quantum fluids and nuclei. Plasma confinement schemes are also being investigated using computational techniques.

The Ion Beam Modification and Analysis Accelerator Laboratory contains four accelerators, including a 200 kV high-current Cockcroft Walton machine, two 2.5 MV single-ended Van de Graaff and a 3 MV Tandem Electrostatic Pelletron-Type Accelerator. The program's objectives are (1) fundamental studies of ion atom collisions, including ionization, excitation and charge transfer processes, and (2) the use of ion beams for materials characterization and modification of electronic and other materials. The most notable of these characterization techniques is the development of an accelerator-based Secondary Ion Mass Spectrometer (SIMS) that can detect impurities in materials at the sub parts-per-billion level. This technique, called Trace Element Accelerator Mass Spectrometry (TEAMS), was developed in conjunction with the materials characterization group at Texas Instruments Inc. Other materials characterization techniques include nuclear reaction analysis, charged particle activation analysis, Rutherford backscattering spectrometry, ion channeling, elastic recoil detection, and particle-induced X-ray emission. These techniques can also be applied with a heavy-ion microprobe attached to the tandem accelerator. Modification of metal and semiconductor materials by ion implantation is also of interest.

Atomic and molecular spectroscopy investigations are being made to determine interaction parameters from line width and line profile data to better understand the collision phenomena and momentum transfer associated with gaseous mixtures. Experimental measurement and theoretical modeling of vibrationally excited molecular systems are being conducted with the goal of understanding molecular potentials. Precision spectroscopic measurements of atomic transition energies are being conducted to test the accuracy of QED theory.

The program in statistical physics has a variety of specializations, including both classical and quantum non-equilibrium statistical mechanics with an emphasis on stochastic differential equations. There also are investigations into deterministic randomness (chaos) and its relation to traditional stochastic processes. These techniques along with the numerical methods are applied to all areas of physics. In addition to the study of chaos, the techniques for non-linear dynamics are applied to the understanding of neural networks (research done in collaboration with members of the biological sciences department) and other complex physiological systems.

The Center for Nonlinear Science (CNS) is a research organization whose research focus is phenomena-driven rather than discipline-driven and, therefore, spans traditional disciplines such as physics, mathematics, biology and economics. The emphasis of CNS is on the development of new analytic and computational techniques to assist in the understanding of complex (nonlinear) phenomena that have not yielded their secrets to traditional methods of investigation.

Federal support of research projects in the department includes the National Science Foundation, the Office of Naval Research, the Air Force Office of Scientific Research, the Army Research Office, the Defense Advanced Research Projects Agency and the Army Night Vision Laboratory. Other research support has been granted by the Robert A. Welch Foundation, the Texas Advanced Technology Research Program, Texas Instruments Inc. and other industries.

Admission Requirements

Application to the master's or doctoral programs in physics is made in two separate parts:

1. The prospective student must complete all of the general application requirements for the UNT Toulouse School of Graduate Studies. These requirements are described in this catalog and on the Toulouse School of Graduate Studies web site. To satisfy the requirements for a standardized admission test, the prospective student must take the general Graduate Record Examination (GRE); of principal interest are the results from the quantitative and analytical portions of the examination.

2. The prospective student must also complete the Department of Physics Graduate Application and submit it along with a current curriculum vitae and three letters of reference to the attention of the graduate adviser, UNT Department of Physics. The application and reference forms are available from the UNT Department of Physics web site. The letters of recommendation must be from individuals familiar with the applicant's academic and/or professional abilities. One letter may be from a current or past employer (if such experience exists), and at least one letter must be from the last academic institution attended.

In addition to the above, the program may consider the applicant's related work experience, research and publication record, presentations at professional meetings, leadership roles, teaching excellence, awards, potential to enhance the intellectual diversity of the department and program, potential to enhance the diversity of the university, and other factors that might provide evidence of potential success in completion of a graduate degree in the Department of Physics.

Degree Programs

The Department of Physics offers graduate programs leading to the following degrees:

- Master of Arts, and
- Master of Science, both with a major in physics; and
- Doctor of Philosophy with a major in physics.

Concentrations at the doctoral level are available in atomic physics, theoretical physics and solid state physics.

Master's Degree Options

Master of Arts (with thesis) or Master of Science (with research problems in lieu of thesis, or a course work option).

Option 1, Master of Arts

The graduate credit requirement for the Master of Arts degree is 30 semester hours chosen in the following manner.

1. PHYS 5500, 5510, 5710 and 5720.

2. PHYS 5950 (6-hour thesis). The thesis must be submitted in the manuscript form prescribed by the American Institute of Physics.

3. 12 semester hours chosen from physics or related fields, with permission of academic adviser and major professor.

Option 2, Master of Science

The graduate credit requirement for the Master of Science degree is 33 semester hours chosen in the following manner.

1. PHYS 5500, 5510, 5710, 5720, 6000 and 3 additional hours chosen from the basic curriculum of the physics PhD program.

2. PHYS 5920 and 5930 (Research Problems in Lieu of Thesis). Research problems in lieu of thesis are independent though not necessarily original studies that may be experimental, computational, tutorial, bibliographic, pedagogic or a combination of these.

As part of the requirements for each problems course, the student must present a formal written report of the work done in the course, which must be approved by the advisory committee and filed in the graduate dean's office. Reports for PHYS 5920 and 5930 must be submitted in the manuscript form prescribed by the American Institute of Physics (see *AIP Style Manual*, current edition).

3. 9 hours chosen from physics or related fields. Physics courses must include PHYS 5450.

Option 3, Master of Science

The graduate credit requirement for the Master of Science degree is 36 semester hours chosen in the following manner.

1. PHYS 5500, 5510, 5710, 5720, 6000, 6001, 6030 and 6110.

2. PHYS 5450.

3. 9 additional hours, which may include 2 hours of PHYS 5940 and 6 hours of PHYS 5900.

Seminar in Current Literature or Colloquium

All physics graduate students must attend the department of physics' colloquium each week during each long term/semester of full-time graduate study. Students may opt to earn credit for this requirement by enrolling in PHYS 5941.

Examinations

An entrance interview concerning fundamental physics is required of all students. The results are used for advisory, placement and remedial purposes.

An oral presentation of the master's thesis (PHYS 5950) is required. The thesis is accepted by the student's advisory committee after an oral examination is successfully completed. Problems in lieu of thesis (PHYS 5920 and 5930) must be accepted by the student's advisory committee; oral presentation is optional.

Doctor of Philosophy

The Doctor of Philosophy degree represents the attainment of a high level of scholarship and achievement in independent research. To be granted a PhD with a major in physics, a graduate student admitted to the physics PhD program must achieve the following: (1) admission to candidacy for the PhD, and (2) approval for the granting of the PhD.

Admission to Candidacy for the PhD

Admission to candidacy for the PhD with a major in physics involves a two-part qualification process. In the first part, the student must demonstrate proficiency in the core areas of physics; in the second, the student must complete required advanced course work, and demonstrate preparedness for conducting independent research toward the dissertation.

1. **Demonstration of proficiency in the core areas of physics:**

The student must complete the following six core courses or their equivalents: PHYS 5500, 5510, 5710, 5720, 6030 and 6110. Students who take these courses at UNT and earn a grade of A in at least three of these courses and a grade of B in the rest will automatically satisfy this part of the qualification process. A student who enrolls at UNT with a master's degree in physics from another institution may meet this requirement by completing PHYS 5510, 5710, 6030 and 6110, and attaining a grade of A in at least two of the courses and a minimum grade of B in the remainder. Alternatively, any student may satisfy this part of the qualification process by earning a minimum grade of B in the six core courses or their equivalent and by passing a comprehensive examination over the core areas of physics, to be scheduled and administered by the departmental examination committee. The expectation is that a student should pass this part of the qualification process after no more than three years of full-time graduate study if entering the program with only a bachelor's degree in physics, and after no more than one year of full-time study if entering the program with a master's degree in physics.

2. **Preparation of independent research:**

There are several aspects to this part of the qualification process. First, the student must select a major professor and a doctoral advisory committee. A major professor provides close guidance and supervision of the student's doctoral studies. The doctoral advisory committee is selected by the student in consultation with the major professor and must include the major professor. Second, the student must file a degree plan, which must be approved by the doctoral advisory committee and the graduate adviser. These two things should be done before or very shortly after satisfying the first part of the qualifying process. Third, the student must complete organized course work required by the degree plan and earn a minimum grade of B in each course. Fourth, after the student and major professor have decided upon a dissertation research project for the student, the student must present a proposal for the research to the doctoral advisory committee. This proposal must be in the form of both a written report and an oral presentation to the doctoral advisory committee. Prior to the oral presentation, the student must provide each member of his or her doctoral advisory committee with a copy of the report. The report and the oral presentation to the doctoral advisory committee must include both a description of the research already done and a proposal of research for completing the dissertation. The doctoral advisory committee will administer an

oral examination at the end of the oral presentation over the proposal and related topics. The doctoral advisory committee must approve of the admission to candidacy for the PhD degree before the student applies for candidacy at the Toulouse School of Graduate Studies. Course work recommendations associated with specific concentrations are available. Please inquire with the graduate adviser. The following courses are recommended for all students: PHYS 5450, 5700, 6000, 6155 and 6500.

Approval of Granting the PhD

Approval of granting the PhD degree in physics requires demonstration of professional research aptitude. Professional research aptitude must be demonstrated by conducting research and reporting the research in at least one peer-reviewed professional journal article of which the student is the first author, in a dissertation and in an oral presentation to the doctoral advisory committee referred to as the final defense. The appropriateness of the journal publication(s) must be evaluated by the committee. At least 30 days prior to the scheduled final defense, the student must provide each member of his or her doctoral advisory committee with a copy of his or her completed dissertation and a copy of the requisite journal article(s), which must be either already published or accepted for publication—in the latter case, copies of the letter(s) of acceptance for publication should be included. The doctoral advisory committee must approve the granting of the PhD degree before the student may submit the dissertation to the graduate dean for final approval.

Courses of Instruction

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Course and Subject Guide

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Department of Political Science

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James Meernik, Chair

Graduate Faculty: Books, Booth, Clough, Cox, Ditslear, Enterline, Esbaugh-Soha, Forde, Greig, King, Maeda, Mason, Meernik, Oldmixon, Paolino, Poe, Reban, Ruderman, Sahliyeh, Todd, Turgeon.

Research

The Department of Political Science has a number of research focuses, including the following: American political parties and behavior (including public opinion, mass political behavior, legislative politics, judicial politics and American political economy); comparative politics (including conflict and political violence, democratization, political institutions, parties and party systems, political behavior, political economy, Latin American politics, Asian politics, African politics and European politics); international relations (including conflict studies, foreign policy, international political economy, peace studies and human rights); political theory (including ancient, modern and American political thought; international ethics; and leadership and democracy); and research methodology.

The department's research has been supported recently by a variety of external sources, including the Fulbright fellowship program, the National Science Foundation, the National Endowment for the Humanities, the Ford Foundation, the International Human Rights Law Group and the Olin Foundation.

As of 2003, the department houses the *International Studies Quarterly*, a premier journal of international studies.

Of special importance to graduate education in political science is the university's membership in the Inter-University Consortium for Political and Social Research (ICPSR), the world's most important repository of social science research data, and the department's membership in the European Consortium for Political Research. The Willis Library has an excellent collection of legal materials, serves as an official repository for U.S. government documents and has a collection of United Nations and related international agency documents.

Graduate students in political science have access to state-of-the-art micro- and mainframe computer resources and have full, free access to the extensive data resources of the ICPSR for use in their areas of research interest. The professional development of graduate students is encouraged through regular student and faculty colloquia.

Admission Requirements

All general admission requirements to the Toulouse School of Graduate Studies, as outlined in the Admission section of this catalog, must be fulfilled.

Applicants for graduate programs must submit scores on the Graduate Record Examination general test. Applicants for the Master of Arts, Master of Science or PhD programs who have not completed the GRE requirement will not be admitted to graduate courses in political science.

Degree Programs

The Department of Political Science offers programs leading to the following degrees:

- Master of Arts,
- Master of Science, and
- Doctor of Philosophy degrees, all with a major in political science.

Concentrations at the doctoral level are available in American government and public law, comparative government and politics, international politics, political theory and methodology, and public administration and management.

Master of Arts, Master of Science

Admission

To be admitted to the Master of Arts or Master of Science programs, a student must have:

1. a bachelor's degree awarded by an accredited college or university;

2. a minimum of 24 hours of undergraduate or graduate work in political science;

3. an acceptable grade point average on the last 60 hours and acceptable GRE scores; for standardized admission test requirements, contact the department or the Toulouse School of Graduate Studies;

4. three letters of recommendation, preferably from professors;

5. a 500-word statement of purpose; and

6. an academic writing sample.

Degree Requirements

The master's degree in political science requires a minimum of 30 semester hours, at least 24 of which must be taken in the Department of Political Science, including PSCI 5340, Seminar in Political Science Scope and Methods, and PSCI 6320, Quantitative Political Research Methods. A minor of 6 hours outside the department is optional. If an outside minor is chosen, the master's degree will include two fields in political science and the outside minor. If an outside minor is not chosen, the program must include two fields in political science.

The fields of political science available for inclusion are American government and politics, comparative politics, international relations, public law, political theory, and research methodology.

Candidates for the Master of Arts degree must present evidence that they have a reading knowledge of at least one foreign language. Language competency is typically defined as two years of language study or the equivalent. Candidates for the Master of Science degree must present evidence that they have achieved competence in a non-language research tool, typically by showing evidence of having completed courses at the graduate level for one of the non-language research tools listed in "Political Science Tool Requirement." This document is posted on the department's web site (*www.psci.unt.edu/Graduate/TOOLCLAS.html*).

Graduate credit course requirements are identical for the two degrees.

Successful completion of a thesis and satisfactory performance on an oral comprehensive examination complete the requirements for the master's degree.

Additional program information is contained under the link "Degree Program Requirements" posted on the department's graduate program web site (*www.psci.unt.edu*). The student is responsible for knowing the program requirements.

Doctor of Philosophy

Admission

To be admitted to the PhD program, the following are required:

1. a bachelor's degree awarded by an accredited college or university;

2. a minimum of 24 hours of undergraduate or graduate credit in political science. With the advance approval of the admissions subcommittee of the department's graduate studies committee, one of the following may be substituted for the 24 hours in political science:

   a. 30 combined hours of credit in political science or other disciplines relevant to the proposed course of graduate study; or

   b. a combination of credit in disciplines relevant to the proposed course of graduate study and substantial work experience in a position or occupation relevant to the proposed course of graduate study;

3. an acceptable grade point average on the last 60 hours and acceptable GRE scores; for standardized admission test requirements, contact the department or the Toulouse School of Graduate Studies;

4. three letters of recommendation, preferably from professors;

5. a 500-word statement of purpose; and

6. an academic writing sample.

Degree Requirements

The doctoral degree requires a minimum of 90 semester hours beyond the bachelor's degree if the student does not choose to earn a master's degree.

If the student already holds a master's degree in political science, a minimum of 60 hours beyond the master's degree is required, including:

1. PSCI 5340, Seminar in Political Science Scope and Methods (3 hours) and PSCI 6320, Quantitative Political Research Methods (3 hours); and

2. completion of a dissertation with a maximum credit of 12 hours.

A student must elect three areas of study for the Doctor of Philosophy degree, at least two of which must be in political science. Additional course work will be taken in other areas of political science or a related field. The student must pass qualifying examinations in two political science areas.

The student plans a program with an advisory committee that consists of a major professor, one professor from each of the student's two other areas, and one departmental representative. The departmental representative is appointed by the political science graduate adviser. This committee advises the student on the program, arranges for all departmental examinations, approves the dissertation topic and judges the completed dissertation as a work of original research and writing justifying the awarding of the degree.

If a student elects a minor outside political science, it must be supportive of the study within the discipline. The outside minor cannot replace either of the political science areas for the qualifying exams. The areas available within political science are:

- political theory
- American government and public law
- research methodology
- comparative government and politics
- international relations

Additional program information is contained under the link "Degree Program Requirements" posted on the department's graduate program web site (*www.psci.unt.edu*). The student is responsible for knowing the program requirements.

Foreign Language or Tool Requirement

Candidates for the PhD must present evidence that they have a reading knowledge of at least one foreign language or that they have achieved competence in a non-language research tool. Language competency is typically defined as two years of language study or the equivalent. The non-language tool requirement is typically fulfilled by completing courses listed in "Courses that will Satisfy Non-Language Research Tools in Political Science." This document is posted on the department's web site.

Research Practicum

The student must complete a 6-hour research practicum by the time the qualifying examinations are completed. The research practicum is an exercise in original research carried out under a faculty member's guidance.

Qualifying Examinations

The qualifying examinations will be taken when all course work and language or research tool requirements have been satisfied. These examinations consist of both oral and written examinations covering the major and one other area in the student's degree plan. Successful completion of these examinations is a prerequisite to admission to candidacy for the degree.

Admission to candidacy is granted by the dean of the School of Graduate Studies upon recommendation of the advisory committee and the department chair; admission is based upon the academic record of the student, approval of a dissertation topic and completion of language or research tool requirements and qualifying examinations.

Research and Dissertation

The doctoral candidate must submit a dissertation demonstrating original and meaningful research that is a significant contribution to the major field. The major professor and other members of the advisory committee must approve the dissertation prior to the final oral examination, which will be primarily a defense of the dissertation.

In the event that all requirements for the degree are not completed within eight years after admission to the program, the advisory committee may require the student to take additional course work. The student also must observe the 10-year time limit for completion of all work toward the doctorate, set forth in the Doctoral Degree Requirements section of this catalog.

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Linda L. Marshall, Chair

Graduate Faculty: Beyerlein, Boals, Campbell, Clark, Critelli, Doster, Guarnaccia, Hayslip, Jenkins, Kaminski, Kelly, Marshall, Martin, Murrell, Neumann, Petrie, Riggs, Rogers, Schneider, Sewell, Taylor, Terrell, Toledo, Vosvick, Watkins.

The Department of Psychology affirms the importance of scholarship, research and quality of education for all students, whether they are preparing for careers in basic research, applied research, teaching, or service delivery. This training takes advantage of numerous resources within the department, including the Psychology Clinic, the Institute of Applied Research, the Brain Mapping Facility and specific laboratories for statistics, psychophysiology, psychosocial health, neuropsychology, and psychoneuroimmunology. Graduates of the department have gone on to distinguish themselves in research, administrative, teaching and service careers in a range of settings, including universities, medical schools, hospitals, mental health centers, counseling centers, rehabilitation facilities, industrial and organizational settings, and private practices in consulting, therapy and assessment.

Research

Faculty in the Department of Psychology are active researchers. Their programs of research offer students a variety of experiences, topics and perspectives, using a number of different methods. Faculty's expertise include topics and methods traditional to subdisciplines and theories of psychology (e.g., psychotherapy, vocational decisions, psychopathology, cognition, aging, physical and psychological health, physiology). Some faculty conduct purely theory-based research using a variety of perspectives (e.g., moral development, personal construct theory, personality theory, stress theory). Other faculty are expert in applied research, designed to address social problems (e.g., abuse, HIV/AIDS, sexual aggression). Many faculty members have programs on the cutting edge of psychology (e.g., psychoneuroimmunology, sport psychology, industrial/organization issues, cognitive neuroscience, memory). In addition, there are ongoing projects on ethical and professional issues, ethnic diversity, minority and women's concerns.

From the time that students enter our graduate program they are given many opportunities and are encouraged to be actively involved in conducting research. Students gain competence in research through course work, vertical research teams headed by a faculty member and informal research experiences. This involvement allows students to gain valuable skills from different faculty members while learning the substantive and methodological knowledge necessary for their future careers. A student's research experience culminates in an independent doctoral dissertation that contributes to the knowledge base of psychology.

Centers

Center for Psychosocial Health. This center consists of a multidisciplinary group that draws upon the disciplines of anthropology, behavioral medicine, education, psychology, public health and sociology to pioneer research on psychosocial phenomena involved in healthy living. Basic research on wellness within a chronic illness context provides a foundation for the future development of psychosocial and behavioral interventions that encourage health-related behavioral change. As chronic illness can affect anyone—regardless of race, ethnicity, gender, sexual orientation and socioeconomic status—we strive to identify, from a multicultural perspective, psychosocial factors critical to the development of effective interventions.

Center for Sport Psychology and Performance Excellence. The Center for Sport Psychology and Performance Excellence (CSPPE) is a multidisciplinary center devoted to offering sport psychology interventions, research and training. The center combines knowledge, skill and expertise from psychology and exercise science to produce the most comprehensive and state-of-the-art sport psychology services available. In addition, through the center, graduate students are able to pursue specialized training in sport and exercise psychology.

Center for Collaborative Organizations. The goal of the Center for Collaborative Organizations is to

create learning partnerships with industry for the purposes of generating, archiving and disseminating information about work teams. The center serves as a research and education entity for organizations using team-based and other collaborative structures and, in conjunction with its industry partners, provides those organizations with the highest quality products and services concerning team issues. The center is committed to harnessing strengths of business and academia in a joint effort to master the challenges of designing and implementing collaborative organizations.

Psychology Clinic. As part of the department's Applied Training Unit, the Psychology Clinic is a training site for graduate students. Through the clinic, psychological services are offered to the community within the Dallas–Fort Worth region. Services available to the community include psychotherapy, vocational counseling, psychological assessment and biofeedback.

Admission Requirements

1. Before being admitted to either the master's or the doctoral program, the applicant must meet the requirements for admission to the Toulouse School of Graduate Studies specified in the Admission section of this catalog.

2. Admission to graduate degree programs in psychology is competitive, as available facilities do not permit admission of all qualified applicants.

Applying is a two-part process. First, prospective applicants for graduate degree programs must obtain and file an application for admission to the UNT graduate school from the graduate dean's office. Second, applicants for graduate psychology degrees also must obtain and file a separate application for admission to psychology programs from the psychology department's graduate office. The application deadline for graduate programs in clinical psychology, counseling psychology, and health psychology and behavioral medicine (HPBM) is the first university work day of January preceding the fall term/semester for which the student is applying. All other programs will commence review of application files on February 1 and continue to admit students through the year according to the university calendar for admission for the fall term/semester. (See the Academic Calendar in this catalog for admissions deadlines.) All academic prerequisites for the clinical, counseling and health psychology/behavioral medicine programs must be completed by the end of the spring term/semester preceding the fall term/semester for which the student is applying.

3. All applicants must submit satisfactory scores on the verbal and quantitative sections of the Graduate Record Examination (GRE) prior to admission. For standardized admission test requirements, contact the department or the Toulouse School of Graduate Studies. Undergraduates who plan to apply for graduate training should arrange to take the GRE during their senior year.

4. References and recommendations must be submitted by applicants for admission to the doctoral and master's programs in psychology. Applicants are required to submit three satisfactory recommendations on special forms provided by the department, including one from their last professional employer (if they have had such previous experience) and one from the last academic institution attended.

In all cases, the Department of Psychology maintains the right to make independent inquiry of the applicant's employers and the faculties of institutions previously attended, as well as to deny admission to an applicant who in its judgment, or in the judgment of any of the psychology departments of the federated universities (in the case of doctoral applicants), fails to meet personal or academic admission standards.

Degree Programs

The department offers graduate programs leading to the following degrees:

- Master of Arts, and
- Master of Science, both with majors in counseling psychology and experimental psychology; and
- Doctor of Philosophy with majors in clinical psychology, counseling psychology, experimental psychology, and health psychology and behavioral medicine.

The doctoral programs in counseling psychology, clinical psychology, and health psychology and behavioral medicine have been approved by the American Psychological Association [750 First Street NE; Washington, DC 20002-4242; (202) 336-5979].

The counseling psychology doctoral program is offered through the Federation of North Texas Area Universities.

The master's degree is intended to prepare students for higher degrees and to qualify them for a number of subdoctoral positions.

The experimental psychology curriculum is intended to provide a highly individualized program for the student interested in study and research in one of several specialized areas.

The doctoral curricula in clinical psychology and counseling psychology are designed to serve a variety of purposes that focus on the development of a well-rounded professional psychologist. These purposes include a thorough grounding in scientific methodology and an orientation to the profession,

development of competency in psychological assessment and evaluation, and training in various psychotherapeutic and counseling techniques and skills.

The program in health psychology and behavioral medicine prepares psychologists for service delivery roles in medical and other health care settings as well as roles in program development and evaluation. There is strong emphasis on mind/body interaction as students focus on the matrix of psychological, social, physiological and environmental processes in understanding etiological and diagnostic factors of illness, prevention and recovery. Fundamental skills in clinical assessment, evaluation and psychotherapy are integrated with scientific advances in health psychology/behavioral medicine in order to meet the holistic needs of the individual.

All departmental PhD programs require successful completion of a doctoral dissertation.

Academic Prerequisites

The minimum criteria for consideration for admission are 24 hours of psychology (12 advanced) plus the following:

PhD minimum criteria for application requires one of the following six:

- 3.0 GPA overall on the BA
- 3.5 GPA on the last 60 hours of the BA
- 3.5 GPA in undergraduate psychology course work
- 3.5 GPA on a completed master's degree (exclusive of practicum and thesis)
- Completed doctoral degree in another field
- First or second author on an article in a peer-reviewed scientific or professional journal

Applicants must submit their GRE verbal and quantitative scores.

MA minimum criteria for application requires one of the following four:

- 2.8 GPA overall on the BA or 3.0 GPA on the last 60 hours of the BA
- 3.0 GPA in psychology course work
- Master's degree in another field
- First or second author in a peer-reviewed scientific or professional journal.

Applicants must submit their GRE verbal and quantitative scores.

Applying to more than one program is not encouraged. The student who elects to apply to more than one program must submit a separate application packet for each program. Each application submitted must be in packet form and mailed under separate cover to the individual programs. Each packet must include a completed psychology department application, photocopies of transcripts, photocopies of GRE score reports, personal resume and a statement of goals. Separate letters of recommendation are required for each program to which the student is applying, and letters must have a program specified. We prefer that letters of recommendation accompany the application packet; however, they may be submitted under separate cover directly from the recommender. If they accompany the application packet, these letters must be sealed and signed across the back flap by the referee. Materials submitted to the School of Graduate Studies do **not** need to be duplicated for each program to which the student applies.

Graduate Record Examination (GRE)

Applicants must have taken the GRE general test **prior to** the application deadlines. The psychology subject test is not required. Applicants should enclose a copy of the score report with the application, if available. The graduate school will send the department a copy if the applicant does not submit one.

Previous College

Applicants should list the names of all colleges attended, even if no degree was received from an institution. When applicable, the name of degree received, date degree was awarded or expected to be awarded, and major should be specified.

Required Psychology Prerequisites

Applicants should list specific undergraduate prerequisite courses to be considered as psychology prerequisites. These specific prerequisite courses cannot be waived and must be completed

- before the end of the spring semester for application to the clinical or counseling programs, or
- by the graduate school deadlines (see the Admission section of this catalog or the Academic Calendar) for applications to health psychology/behavioral medicine and experimental programs for the application to be considered for the following fall term/semester.

Graduate programs in psychology admit students only to fall terms/semesters.

Applicants who have not already taken these courses should make note on the application form of when they will be taken. This prerequisite course work includes two courses for master's applicants:

- Experimental Psychology or Research Methods/Design, and
- Statistics.

The requirement for Experimental Psychology or Research Methods/Design and Statistics must be completed in two courses.

For doctoral applicants, statistics, **plus three** of the following broadly named courses are required as prerequisites:

- Experimental Psychology or Research Methods/Design
- Learning
- Perception
- Motivation
- Cognition
- Psychological Measurement
- Physiological Psychology
- Research Thesis.

Applicants **must** enclose either a catalog description (Internet printout is acceptable) or syllabus for these specific prerequisite courses. A course in statistics from a department other than psychology could apply to fulfill the prerequisite requirement, and the grade points from this course would be included in the psychology hours GPA. However, such a course is not credited toward the required prerequisite psychology semester hours. To calculate Quality Points, multiply grade (4.0, 3.0, 2.0) by hours of the class (4.0, 3.0, 2.0, 1.0). Example: a grade of A (4.0) in a 3 hour class would equal 12 quality points.

Those doctoral applicants who hold a master's degree with a major in psychology, but not an undergraduate degree in psychology may elect to use master's course work to satisfy psychology prerequisites. If admitted to a graduate program, the courses used as prerequisites may not be used toward a degree plan as transfer work.

In addition to the specific courses outlined above, the applicant must also have psychology course work of 24 semester hours (12 hours upper level) to be considered. Those applicants with a bachelor's or master's degree with a major in psychology would have completed, in the course of the degree, more than the required 24 semester hours. All of these courses must be taken in a psychology or educational psychology department. Courses listed to fulfill the total number of hours requirements should be converted to semester hours using a four-point system.

Academic Record

All GPA's should be computed on a 4.0 scale (A=4, etc.). The Department of Psychology computes plus- or minus-grades as the straight letter grade. The minimum requirements follow.

For **master's** applicants **with a completed bachelor's degree**:

- a GPA of 3.0 on the last 60 semester hours **or** a GPA of 2.8 overall on the bachelor's degree, and
- a GPA of 3.0 on all psychology hours.

For **doctoral** applicants **with a completed bachelor's degree only**:

- a GPA of at least 3.5 on the last 60 semester hours or a GPA of 3.0 for the entire bachelor's degree.
- a GPA of 3.5 on all undergraduate major or minor course work in psychology.

For **doctoral** applicants **with a completed master's degree in psychology**:

- a GPA of 3.5 on all graduate work, exclusive of practicum and thesis.

Applicants with completed bachelor's or master's degrees in a field other than psychology must meet the GPA requirements stated above and also have completed the minimum hours of prerequisite psychology courses with the minimum GPA requirements stated above.

Degree Requirements

A program committee has been constituted by the department to consider the possible separation from the degree program of any student who in the committee's judgment appears unlikely to succeed professionally, regardless of grades earned. Students who do not make satisfactory and continuous progress may be dropped from their program.

Students interested in becoming licensed and certified as psychologists or psychological associates in the state of Texas are required to have specified supervised experiences that are approved by the Department of Psychology. Departmental program directors should be consulted for details.

Master of Arts, Master of Science

Both the Master of Arts and the Master of Science degrees are available in the Department of Psychology. Description of procedures for fulfilling the language requirement is located in the Master's Degree Requirements section of this catalog. For any master's degree that does not include a thesis, a final oral comprehensive examination is required.

All degree programs must be planned in consultation with the student's advisory committee. Students are strongly urged to file a degree plan during their first term/semester of graduate study.

Clinical Psychology

Pass-through degree only; program does not accept master's applicants.

Counseling Psychology

61–64 Hours

Required courses: PSYC 5050, 5340, 5420, 5430, 5470, 5680, 5690, 5700, 5780, 5820, 5831-5832, 5880 and 5950.

Other courses will be selected in consultation with the student's advisory committee.

Students interested in becoming licensed professional counselors in the state of Texas should notify the director of their program area so their degree plan may be arranged to include appropriate course work.

An option to substitute 6 hours of academic courses, practicums or field work for the thesis is provided for the student who does not intend to proceed with doctoral work. Such substitutions must be approved by the student's advisory committee. For such a substitution 750 clock hours of practicum, and a minimum grade of B must be made on courses substituted for the thesis.

Experimental Psychology

Track 1, 32 Hours

Will not lead to eligibility to take the psychological associate examination in the state of Texas.

Required courses: PSYC 5640, 5700, 5710, 5840 and 5950.

Electives: 6 hours selected from the remaining 5000-level psychology courses, in consultation with the major professor.

Minor: a 6-hour minor from a field outside the Department of Psychology may be selected.

Track 2, 44 Hours

Required courses: PSYC 5640, 5700, 5790, 5840, 5900 and 5950.

Electives: 12 hours selected from the remaining 5000-level psychology courses, in consultation with the major professor.

Minor: a 6-hour minor from a field outside the Department of Psychology may be selected.

Doctor of Philosophy

Course Requirements and Use of Transfer Credit

The PhD degrees in psychology require a minimum of 90 semester hours beyond the bachelor's degree, plus a one-year supervised internship for the clinical, counseling, and health psychology/behavioral medicine programs. The qualified and accepted student may enter a degree program holding either a bachelor's or master's degree. No more than 30 hours from a master's degree can be applied toward deficiencies for the doctoral degree.

A student entering with a master's degree or equivalent may, upon the consent of the advisory committee, transfer a maximum of 12 appropriate semester hours beyond the master's degree, provided the work has been taken in a department offering a doctoral degree in psychology. Thus, a minimum of 48 hours in residence would remain to be completed.

Students should be aware that internship training sites are spread across the country. Responsibility for an internship training site's compliance with the Americans with Disabilities Act rests with the internship site. Internships are competitive and the student is responsible for securing an internship that meets with departmental approval.

Clinical Psychology

This program requires a minimum of 96 semester hours plus a one-year internship. The 20 hours in general core psychology include the following: advanced social psychology, advanced research design, advanced statistics, theories of learning, advanced history and systems, and advanced physiological psychology. The clinical core consists of professional issues and ethics; assessment, evaluation and diagnosis; psychotherapy; psychopathology; and clinical service skills.

A pass-through master's degree is possible with 50–60 hours and program approval. A pass-through master's application must be filed with the graduate school.

50–60 Hours

Required courses: PSYC 5420, 5430, 5700, 5780, 5820 (6 hours), 5831-5832 and 5950.

Electives: PSYC 5640 and one additional course selected from 5010, 5070, 5640, 5680 and 5710.

Additional courses: two courses (at least 3 hours each) selected from (a) the remaining 5000-level psychology courses, or (b) one field outside the Department of Psychology, as a minor.

Counseling Psychology

This program requires a minimum of 111 semester hours plus a one-year internship and includes 20 hours in general core psychology: advanced social psychology, advanced research design, advanced statistics, theories of learning, advanced history and systems, and advanced physiological psychology.

The counseling core consists of 45 hours that includes course work in the following areas: developmental issues, assessment, individual and group techniques, legal and ethical issues, psychopathology, vocational psychology, personality and multiculturalism. Counseling majors are required to take a pre-practicum for which they receive 4 hours credit. A research core composed of 16 hours and practicum training consisting of 12 hours also are required. The elective cluster is composed of 12 hours selected to represent an organized and integrated sequence in the student's area of interest.

Experimental Psychology

This program requires a minimum of 92 semester hours and includes 20 hours in general core psychology: advanced social psychology, advanced research design, advanced statistics, theories of learning, advanced history and systems, and advanced

physiological psychology. The experimental core consists of a minimum of 15 hours in experimental psychology, statistics and research practicums. The student is expected to be involved in research throughout the program. Further experimental core requirements are selected in consultation with the student's major adviser, to be selected from one of four concentration areas. A minor field consisting of 12–18 hours may be selected. Each student must also complete a 6- to 12-hour integrated elective area in psychology that is consistent with individual interests.

Health Psychology and Behavioral Medicine

This program is offered in collaboration with our sister department at the UNT Health Science Center. Professional study requires a minimum of 103 semester hours, including 20 hours of general psychology (social psychology, research design and statistics, learning and cognition, history and systems, and physiological psychology) and 42 hours of clinical core courses (psychological assessment, psychopathology, medical and behavioral disorders, professional ethics, cultural aspects of health, psychotherapy methods, behavior analysis, developmental health psychology, applied psychophysiological procedures, and psychoneuroimmunology). Students are continually involved in clinical and research experiences before culminating professional preparation with a one-year, full-time clinical internship.

Dual Degree Options

All doctoral programs make provisions to allow the completion of a master's degree in general psychology.

Behavioral medicine makes provision for this plus three other master's programs. En route to completing the requirements for the PhD students may select behavioral analysis or public health.

These additional options require separate application to and admission by the Department of Behavior Analysis or the School of Biomedical Science respectively. The option with behavioral analysis provides a knowledge base in the principles, theory and research methods of behavioral analysis for applications in medicine and health contexts. The option with public health prepares students for roles in the development, implementation and evaluation of models involving the promotion of health behaviors, the prevention of physical and psychological trauma, and the creation of environmental contexts supportive of personal well-being.

Foreign Language or Research Tool Requirement

Candidates must present evidence that they have a reading knowledge of one foreign language (see the Doctoral Degree Requirements section for details) or have demonstrated competency in a research tool subject that has been approved by the Department of Psychology and the graduate council. If the tool substitution involves taking additional courses, the student must make a minimum grade of B in each course. Credits earned are in addition to the hours required for the degree.

Residence Requirement

The candidate must meet the doctoral residence requirement as outlined in the Admission section of this catalog.

Qualifying PhD Examination in the Major Area

Each of the departmental PhD programs requires successful completion of a comprehensive examination in the student's respective program. The faculty in each program area is responsible for the format, administration and grading of the examination.

Dissertation Examinations

Students complete two dissertation-related examinations: the proposal and the final comprehensive examination. Students first defend their dissertation proposal, which can be done only after successfully completing the language requirement, master's thesis or its equivalent, and the qualifying PhD examination for the program. Upon completion of the dissertation research, the student may schedule the final comprehensive exam for the dissertation.

Advisory Committee

A temporary degree program adviser is assigned to doctoral students during the first term/semester of enrollment. The dissertation committee is formed at some point later in the student's program. The minimum number of members for a dissertation committee is four. It is the department's expectation that one of the four members will be from outside the department of psychology.

Courses of Instruction

All Courses of Instruction are located in one section at the back of this catalog.

Course and Subject Guide

The "Course and Subject Guide," found in the Courses of Instruction section of this book, serves as a table of contents and provides quick access to subject areas and prefixes.

Department of Radio, Television and Film

Main Departmental Office
Radio, TV, Film and Performing Arts Building, 262
P.O. Box 310589
Denton, TX 76203-0589
(940) 565-2537

Web site: *www.rtvf.unt.edu*

C. Melinda Levin, Chair

Graduate Faculty: Albarran, Benshoff, Craig, B. Levin, M. Levin, Liu, Park, Sauls.

The department offers graduate programs leading to the following degrees:

- Master of Arts,
- Master of Science, and
- Master of Fine Arts, all with a major in radio/television/film.

The Master of Arts and Master of Science programs are designed for persons who wish to pursue research in mass communication leading to a written thesis. Building on a strong undergraduate program, the department has a particular emphasis at the graduate level in the following areas:

- Documentary studies, which includes the history of and current trends in documentary film;
- Media industry studies, which includes topics such as economics of the mass media, media management, law and regulation for broadcasting, audience research, globalization, programming and television news; and
- History and criticism, which includes topics such as film and television criticism, ethnicity in American film, genre studies, and media history and theory.

The Master of Fine Arts program is designed for persons who wish to receive academic, aesthetic and technical training that will lead to the creation of a major production thesis.

Research

Members of the radio/television/film faculty include internationally recognized scholars, seasoned media professionals and award-winning documentary filmmakers. Research specialties include media history and criticism, cultural studies, international media and broadcast operations. Books written by RTVF faculty are used in university courses throughout the world, and faculty-produced films and television programs have been broadcast on television, selected for film and video festivals and screened at numerous other venues including New York's Museum of Modern Art. Faculty members also serve on the boards of national and international organizations dealing with media education and film preservation.

Admission Requirements

Master of Arts, Master of Science

Applicants must meet the requirements of both the Toulouse School of Graduate Studies and the Department of Radio, Television and Film. If applicants are accepted by the Graduate School, their files are forwarded to the Graduate Committee in the Department of Radio, Television and Film for further evaluation. The following may be considered the RTVF department's minimum requirements.

- Completion of a bachelor's degree from an accredited institution with an overall GPA of at least 3.0.
- Completion of a minimum of 24 hours of undergraduate courses in RTVF or related field of study such as mass communications, media studies or media production.

To apply, the following materials should be sent **directly to the Toulouse School of Graduate Studies**.

1. Official transcripts from all undergraduate and graduate institutions attended.
2. Official GRE scores sent from the Educational Testing Service.
3. A completed graduate application form.
4. Application fee.

In addition, the following items should be submitted **directly** to the RTVF director of graduate studies at the department's address above.

1. A statement of purpose, in which the applicant states career goals and tells why the master's degree in RTVF from UNT will help achieve those goals.
2. A required writing sample (research paper, professional report, substantial essay, etc.).
3. A minimum of two current letters of recommendation. For most applicants, the letters must be provided by current or former professors. An applicant who has worked professionally in radio, television or film may submit one of these letters from a person who has supervised his or her work. If an applicant has been out of school for several years, both letters may be from people who can evaluate his or her work in these fields.
4. An applicant from outside the United States must demonstrate proficiency in oral and written English prior to admittance. In addition to GRE scores, nonnative speakers must submit TOEFL scores.

After the first 12 semester hours of graduate study are completed, the student and the director

of graduate studies prepare a degree plan using one of the options available in the student's area of concentration. The degree plan must be approved by the department chair and the graduate dean. Until it has been approved, the student will not be permitted to enroll for additional graduate work for credit applicable to the degree.

The RTVF department curriculum for MA/MS degrees is designed to allow for two-year completion, with course work beginning in the fall term/semester.

Master of Fine Arts

In addition to those items listed under Admission Requirements for the Toulouse School of Graduate Studies, applicants for the MFA program must submit the following **directly** to the RTVF director of graduate studies at the department's address above:

1. A statement of purpose, describing both reasons for pursuing the terminal degree in media production and the specific areas of academic and professional interest.

2. A portfolio of creative work submitted on VHS, DVD, DV, CD or DAT (in the case of audio productions). The sample should include one complete production and 10 minutes of excerpts from additional work. If relevant, still photographs or other material that demonstrates the applicant's creative talents and accomplishments may be submitted following consultation with the director of graduate studies. All materials should be labeled and include a content list, lengths, and the applicant's role in the production. Materials submitted will not be returned. Do not mail tapes in fiber-filled envelopes.

3. A writing sample representative of the applicant's best academic work in the field.

4. Three letters of recommendation from faculty. If the applicant has not attended an academic institution for the past four years or more, two of these letters may come from professional colleagues capable of commenting on the applicant's probability of success in a rigorous graduate program.

5. In specific instances, the Radio, Television and Film Graduate Committee may require an interview of applicants under consideration. This interview may take place in person, via videoconference or conference telephone call.

6. An applicant from outside the United States must demonstrate proficiency in oral and written English prior to admittance. In addition to GRE scores, international students must submit TOEFL scores.

Previous academic work and/or professional performance, as demonstrated in the portfolio of creative work submitted with the application, must indicate the potential for graduate work in a rigorous, production-oriented graduate program.

Degree Programs

Master of Arts, Master of Science

The master's degree requires the completion of at least 36 hours of graduate course work, including 6 hours of thesis credit. A satisfactory written thesis must be presented and defended. A student may also elect 6–12 hours in a minor area. In addition, students must maintain a minimum GPA of 3.25 while in the program. Any student whose GPA drops below this level will be placed on probation for one semester. If at the end of the probationary semester the student's GPA has not been raised to a 3.25 or better, the student will be dropped from the program.

The MA requires completion of the equivalent of four terms/semesters of undergraduate language study, which may be completed in the undergraduate program or during graduate study at UNT. Other than this requirement, the curriculum for MA and MS students is the same.

Course Requirements

Students must take at least one course from each of the areas of graduate study emphasis (media industry studies, history and critical studies).

Students must take RTVF 5100 (Introduction to Graduate Study in RTVF) during their first fall term/semester enrolled as an RTVF graduate student and RTVF 5120 (Literature of RTVF I) and RTVF 5130 (Literature of RTVF II).

Master of Fine Arts

The primary educational objective of the Master of Fine Arts degree with a major in radio, television and film production is the academic, aesthetic and technical training of production professionals. In addition, the MFA degree is now the primary terminal degree for production faculty at college and university programs in the United States. This program emphasizes documentary production and studies and allows students to consider their roles in a globalized media environment.

The MFA requires 60 credit hours and will take approximately three years to complete.

Degree Requirements

Students must successfully complete a minimum of 60 semester hours: 36 hours of required courses, including 6 hours of MFA colloquium; 6 hours of prescribed electives; 12 hours of electives; and 6 hours of thesis. In addition, students must maintain a minimum GPA of 3.25 while in the program. Any student whose GPA drops below this level will be placed on probation for one semester. If at the end of the probationary semester, the student's GPA has not been raised to a 3.25 or better, the student will be dropped from the program.

Thesis Production

The capstone experience for each MFA candidate, the thesis is a major creative production (6 semester credit hours). A substantial written production book is to accompany the work and should include historical/theoretical context for the production, in addition to detailed documentation of the production process. The thesis should illustrate the student's ability to successfully execute professional-level production work of high quality, in addition to demonstrating the student's knowledge of production techniques and historical/theoretical perspective.

Transfer Credits

Policies and guidelines of the Toulouse School of Graduate Studies are followed when awarding transfer credit. Subject to approval of the graduate dean and the RTVF department, a student who holds a bachelor's degree and has been admitted to the Toulouse School of Graduate Studies and to the RTVF MFA program at UNT, may apply up to 12 semester hours of graduate credit toward the degree.

The Center for Spanish Language Media

The Center for Spanish Language Media is housed within the RTVF department and has a three-fold mission: education, research and professional development. In terms of education, interdisciplinary courses are offered at the undergraduate and graduate levels on different aspects of Spanish language media and Latino history and culture. In regards to research, the center sponsors and disseminates research on Spanish language media companies, trends and issues, through conferences, workshops and seminars. The center also offers workshops and seminars for existing Spanish language media professionals interested in improving their knowledge and skills.

KNTU-FM

Radio station KNTU-FM, broadcasting at 100,000 watts on 88.1mHz, serves the Denton/Dallas/Fort Worth/McKinney area with educational, information and entertainment programming daily from 6 a.m. to midnight. All students at UNT are eligible to work at KNTU where they can learn skills in radio production, programming and station administration. More information is available at *www.kntu.fm*.

NTTV - North Texas Television

North Texas Television (NTTV) is a student-operated cable television channel where students learn to produce video programs in a wide range of topics and formats, including news, sports, public affairs and entertainment. All students at UNT are eligible to work at NTTV.

Graduate Assistantships

A limited number of graduate teaching and research assistantships are available for outstanding applicants. Decisions on assistantships are made in March for the following fall term/semester. An application form is available from the director of graduate studies.

Courses of Instruction

All Courses of Instruction are located in one section at the back of this catalog.

Course and Subject Guide

The "Course and Subject Guide," found in the Courses of Instruction section of this book, serves as a table of contents and provides quick access to subject areas and prefixes.

Department of Speech and Hearing Sciences

Main Departmental Office
Speech and Hearing Center, 260
P.O. Box 305010
Denton, TX 76203-5010
(940) 565-2481

Web site: *www.sphs.unt.edu*

Samuel Matteson, Interim Chair

Graduate Faculty: Amlani, Cokely, Gopal, Jimenez-Castro, Lu, Olness, Schafer, Terrell.

The primary goal of the Department of Speech and Hearing Sciences is to prepare students to work professionally with communicatively disabled individuals. The department provides course work, laboratory training and clinical practicum experiences that enable students to satisfy the educational and clinical requirements for national professional certification and state licensure in speech-language pathology, audiology, or both. A second and equally important mission of the department is the professional development of the discipline through research and clinical services.

Research

The Department of Speech and Hearing Sciences possesses research laboratory space and state-of-the-art equipment to conduct a wide range

of investigations on both the normal and abnormal production, perception, recognition and understanding of speech and language. Research includes studies of auditory evoked potentials, stuttering, speech perception, articulation, language, motor speech disorders and vocal pathologies. Other ongoing research projects investigate communication assessment and rehabilitation techniques including hearing aids, cochlear implants, auditory processing in children and adults, hearing loss in musicians in conjunction with the Center for Music and Medicine, and the investigation of auditory cortical neuron pattern processing studies being carried out in collaboration with the Department of Biological Sciences.

Accreditation

The graduate programs in both speech-language pathology and audiology are accredited by the Council on Academic Accreditation of the American Speech-Language-Hearing Association (ASHA) [10801 Rockville Pike, Rockville, MD 20852; (800) 498-2071]. Students who earn the master's degree in speech-language pathology and the doctorate in audiology will be provided with the opportunity to meet the academic and clinical practicum requirements for ASHA's Certificate of Clinical Competence in their specialty areas. Those students whose programs of study at the master's or doctoral level satisfy the ASHA requirements will simultaneously satisfy the requirements for licensure by the State of Texas in the professional area of the student's degree program.

Admission Requirements

Admission to the graduate degree program in speech and hearing sciences is competitive. Available facilities and clinical resources do not permit admission of all qualified applicants.

Admission forms may be obtained from the Dean of the Toulouse School of Graduate Studies, from the Department of Speech and Hearing Sciences or from the department's web site. All required materials should be filed by February 15 for admission in the following fall term/semester for speech-language pathology, and by March 1 for audiology. Admission is granted in the spring term/semester for speech-language pathology only. Completed applications should be filed by October 1. Audiology students are admitted only in the fall term/semester. All required material (including GRE scores) must be on file before prospective applicants will be considered for admission. Undergraduates who plan to apply for graduate study should arrange to take the GRE during their junior or senior year.

In addition to the admission requirements of the graduate school, the department requires the following.

1. A grade point average (GPA) of at least 3.0 on the last 60 hours of undergraduate work or an overall GPA of 2.8 on all undergraduate work.
2. A GPA of at least 3.0 on all speech and hearing sciences course work, including those courses taken to remove undergraduate deficiencies.
3. All students must submit satisfactory scores on the Graduate Record Examination (GRE) prior to admission. Students will not be provisionally admitted to the master's programs in speech pathology or audiology. For standardized admission test requirements, contact the department or the Toulouse School of Graduate Studies.
4. Three satisfactory letters of recommendation, including one from the last academic institution attended.

Letters of recommendation should be addressed to: Director of Graduate Studies, Department of Speech and Hearing Sciences, University of North Texas, P.O. Box 305010, Denton, TX 76203-5010.

In all cases, the department maintains the right to make independent inquiry of the applicant's references and the faculties of institutions previously attended as well as to deny admission to an applicant who, in its judgment, fails to meet personal or academic admission standards. In all cases the applicant is assured the right to due process.

Individuals applying to the graduate program in speech-language pathology without a minimum of 15 hours of undergraduate course work in speech and hearing sciences but who otherwise meet departmental GPA and GRE admission requirements will be required to complete at least 15 hours of course work at the undergraduate level in this discipline before proceeding to graduate study. Depending upon undergraduate preparation, additional undergraduate course work may be necessary to meet requirements for professional certification and licensing.

Individuals applying to the professional doctoral program in audiology without a minimum of 9 hours of undergraduate course work in speech and hearing sciences will be required to complete at least 9 hours of course work in this discipline. These courses may be taken concurrently with graduate-level courses in audiology.

Individuals, regardless of their prior undergraduate major, who do not meet the departmental GPA requirements and who still wish to enter the departmental graduate program, will be required to take a 30-semester-hour program of undergraduate course work in this discipline at the University of North Texas and earn a GPA of 3.0 or better. Individuals who successfully meet this requirement must resubmit their application for graduate admission to this program and will still be required to satisfy the departmental GRE requirements.

Students admitted to the Toulouse School of Graduate Studies as non-degree students are restricted from enrollment in the following:

a. graduate-level courses in speech pathology and audiology; and

b. SPHS 4060, 5060, 6010, or 6020 (clinical practicum) courses for either graduate or undergraduate credit.

Non-degree students who register for any of these courses will be subject to administrative withdrawal. Non-degree students may enroll in undergraduate courses for undergraduate credit only.

Degree Programs

The department offers graduate programs leading to the following degrees:

- Master of Arts, and
- Master of Science, both with a major in speech-language pathology; and
- Doctor of Audiology.

Speech-Language Pathology Program

- Master of Arts, and
- Master of Science.

Two options are available:

- 45 semester hours of courses plus clinical practicum, or
- 39 semester hours of courses plus 6 semester hours of thesis credit plus clinical practicum.

Each of these options includes 6 graduate semester hours in audiology.

A final written comprehensive examination is required of all students who do not write a thesis. Those who write a thesis will be examined by the thesis committee about the thesis topic. The comprehensive examination will focus upon the various content areas of speech-language pathology, including normal aspects of speech, language and hearing, rather than upon specific courses that may constitute an individual degree plan.

Audiology Program

The department offers the Doctor of Audiology (AuD) degree. This is a post-baccalaureate four-year degree and includes:

- 78 semester hours of academic courses, plus
- 36 semester hours of clinic courses and a clinic externship in the fourth year.

In most circumstances, all academic course work is to be completed in three years. Students in their fourth year of the program will complete a clinical residency. Prior to beginning the clinical residency, all students are required to complete a directed research project or its equivalent and pass a comprehensive written and practical examination.

Program Policies

1. All students must maintain a B average on all courses that receive graduate credit.
2. Students may earn a grade of C in no more than two graduate courses. Students may repeat two courses in which they received a grade of C. They may repeat any given course only once.
3. Students admitted to a graduate program should consider a clinical practicum an integral part of their graduate study. All speech and language pathology graduate students must enroll in SPHS 5060 for a minimum of 6 semester credit hours. All audiology doctoral students must enroll in SPHS 6010 through SPHS 6090 for a minimum of 36 semester credit hours. Degree candidates may petition the department chair in writing for an exemption from clinical enrollment. Such a petition should be submitted prior to the registration period of the term/semester for which an exemption is sought.
4. Students are expected to make satisfactory progress in clinical practicum throughout their program. If a student does not receive a passing grade in any term/semester, the student will not receive credit for the clinical clock hours.
5. A student may be removed from the audiology or speech and language pathology program in this department when failure to make satisfactory progress has been documented. Unsatisfactory progress shall be defined as:
   a. a grade of C or below in more than two courses. This includes any and every course repeated for a higher grade as well as any course listed as a prerequisite for graduate study;
   b. a grade of NP in two or more enrollments of clinical practicum, SPHS 5060, or a grade of C in two or more enrollments of SPHS 6010 through SPHS 6090;
   c. a grade of C in an academic course and a grade of NP in clinical practicum, SPHS 5060, or a grade of C in SPHS 6010 through SPHS 6090;
   d. unsatisfactory defense of a thesis; and
   e. failure to pass the comprehensive examination after three attempts within a 12-month period.
6. Students may appeal any decision made upon the basis of these department policies. Such an appeal should be made in writing to the chair of the department. Appeals will be considered by the department according to the procedures set forth in the *Student Guide* and the *Faculty Handbook* of the university.

Courses of Instruction

All Courses of Instruction are located in one section at the back of this catalog.

Course and Subject Guide

The "Course and Subject Guide," found in the Courses of Instruction section of this book, serves as a table of contents and provides quick access to subject areas and prefixes.