This will replace the existing material:

Graduate Programs – Effective Fall 2012

MS in Earth and Environmental Sciences
- Environmental Science Option
- Geoscience Option
- Environmental Science Professional Option
- Petroleum Geoscience Professional Option

PhD in Environmental and Earth Science

Objectives

Admission

Degree Requirements

The next pages have the information for each of the above links

Program Objectives – Effective Fall 2012

The MS in Environmental and Earth Sciences has four options: an Environmental Science Option; a Geoscience Option; a Professional Environmental Science Option; and a Petroleum Geoscience Option.

The Environmental Science Option provides graduate students with an integrated, multidisciplinary education, requiring a breadth of understanding and mastery of a spectrum of scientific and engineering principles.The thesis option, designed for those interested in an in-depth experience in some particular topic, and a non-thesis option are available.

The Geoscience Option is a two year program with specializations in stratigraphy, paleontology, sedimentology, structural geology, tectonics, plate tectonics, computer modeling, geochemistry or paleoclimatology. Students in this program are prepared for additional graduate work at the PhD level, or for positions in industry and government. Thesis or non thesis options are available.

The Environmental Science Professional Option is a Professional Master's Degree for those interested in a career in Environmental Science. Instead of a thesis, students are participate in a mentoring program, take a course in project economics, work as an intern or in a part time job in the Environmental Science Profession, and participate in course experiences involving business ethics, teamwork, a small research project, and communication. This is a non thesis program.

The Petroleum Geoscience Professional Option is a Professional Masters Degree for those interested in a career in Petroleum Geoscience. In addition to core geology courses, students are required to participate in a mentoring program with industry professionals, work as an intern or in a part time job in petroleum geoscience, take a course in project economics, and participate in course activities that emphasize business ethics, teamwork and communications. A thesis research project is required.

The PhD in Environmental and Earth Sciences. The program leading to the Doctor of Philosophy degree in Environmental and Earth Sciences is designed primarily to prepare doctoral-level students for research careers in industry, government or academic institutions. Students carry out independent research and acquire practical knowledge of the type of research conducted and the constraints (both practical and philosophical) under which such research is conducted. The areas of research are interdisciplinary using the Earth's environment, interpreted broadly, as the theme. Research normally comes from the disciplines of Geoscience, Biology, Chemistry and Engineering, but contributions from other disciplines are welcome. The program is designed to provide graduate students an integrated, multidisciplinary education, requiring a breadth of understanding and mastery of a spectrum of scientific and engineering principles. Among the goals is to provide students who have earned engineering or science undergraduate degrees a common ground for interdisciplinary communication, an understanding of the environment, and competence in a research area that will enable them to evaluate complex environmental problems.

Admission – Effective Fall 2012

Students applying for MS or PhD degrees should apply to the Graduate School for regular admission to a particular degree program. Those applying to a Certificate Program should apply as a Special Student.

Categories of admission:

Unconditional - all the admission criteria are met and there are no conditions placed on continued enrollment in the program.

Probationary - Applicants that do not meet the standards for unconditional admission may be considered for probationary admission after careful examination of their application materials. Probationary admission normally requires that the applicant receive a B or better in their first 12 hours of graduate coursework at UT Arlington.

Deferred and Provisional Admission - A deferred admission may be granted when an application is incomplete or when a denied decision is not appropriate. An applicant unable to supply all required documentation prior to the admission deadline but whom otherwise appears to meet admission requirements may be granted provisional admission.

International students must have a minimum score of 550 on the TOEFL exam.

Financial Aid. Students that are unconditionally admitted can also apply for available scholarship and/or fellowship support. Award of scholarships or fellowships will be based on consideration of the same criteria utilized in admission decisions. To be eligible, candidates must have a GPA of 3.0 in their last 60 undergraduate credit hours plus any graduate credit hours as calculated by the Graduate School, and must be enrolled in a minimum of 9 hours of coursework in both long semesters to retain their fellowships. In addition, international students must also have a minimum score of 40 on the TSE to be eligible for a Graduate Teaching Assistantship.

Denial of Admission - A candidate may be denied admission if they have less than satisfactory performance on a majority of the admission criteria described above.

Environmental and Earth Sciences Master's Program Admissions

For unconditional admission a student must meet the following requirements:

For the Environmental Science Options: A B.S. degree in biology, chemistry, geoscience, mathematics, or engineering with the following courses or their equivalent: 1 semester of introductory physics for science majors; 2 semesters of introductory chemistry for science majors; and 2 semesters of calculus. Students with a Bachelor's Degree in other sciences will also be considered, subject to satisfactory completion of deficiency courses.

For the Geoscience Options: A B.S. degree in an Earth Science discipline with the following courses or their equivalent: Mineralogy, Petrology, Structure, Stratigraphy, Field Geology and Geophysics or Paleontology. In addition, students need a year of Chemistry, Biology, Physics and Calculus.

For all Options:

1. A minimum undergraduate GPA of 3.0 on a 4.0 scale, as calculated by the Graduate School.
2. Graduate Record Examination (GRE) scores are considered in admission decisions. Masters students who have succeeded in the Environmental and Earth Sciences Program typically score higher than the 60th Percentile on the verbal and quantitative portion of the GRE.
3. For applicants whose native language is not English, a minimum score of 550 on the Test of English as a Foreign Language (or an equivalent score on a computer-based test) or a score of 40 on the Test of Spoken English.
4. Favorable letters of recommendation from people familiar with the applicant's academic work.
5. Students may be considered for unconditional admission if further review of their transcripts, recommendation letters, correspondence or direct interactions with Environmental and Earth Sciences faculty, and statement of professional or research interests indicates that they are qualified to enter the Masters Program.

Environmental and Earth Sciences Doctoral Program Admissions

For unconditional admission a student must meet the following requirements:

1. A Masters Degree or at least 30 hours of graduate coursework in environmental science, biology, chemistry, geology, mathematics or engineering.
2. Students with a Bachelor's degree in biology, chemistry, geology, mathematics, or engineering will be considered for the B.S. to Ph.D. track if they meet the other requirements for admission to doctoral studies. Students with a Bachelor's Degree in other sciences will also be considered, subject to satisfactory completion of courses to make up deficiencies.
3. A minimum graduate coursework GPA of 3.0 on a 4.0 scale, as calculated by the Graduate School.
4. Graduate Record Examination (GRE) scores are considered in admission decisions. Doctoral students who have succeeded in the Environmental and Earth Sciences Program typically score higher than the 60th percentile the verbal and the quantitative portion of the GRE.
5. For applicants whose native language is not English, a minimum score of 550 on the Test of English as a Foreign Language (or an equivalent score on a computer-based test) or a score of 40 on the Test of Spoken English.
6. Favorable letters of recommendation from people familiar with the applicant's academic work and/or professional work.
7. A statement must be submitted to the program detailing the applicant's specific research interests and identifying the faculty member who is requested as supervisor of the dissertation research.
8. Students may be considered for unconditional admission if further review of their transcripts, recommendation letters, correspondence or direct interactions with Environmental and Earth Sciences faculty, and statement of research interests indicates that they are qualified to enter the Doctoral Program.

Degree Requirements – Effective Fall 2012

Environmental and Earth Sciences Master's Degree

There are additional requirements for all Master's programs listed in this catalogue under the Graduate School

Environmental Science Option:

Core Courses (15 hours)

Engineering (6 hours)

CE 5321 Engineering for Environmental Scientists

CE 5319 Physical-Chemical Processes II **or CE 5328** Fundamentals of Air Pollution

Two of the following courses in science (6 hours):

EVSE 5309 Environmental Sciences-Biological Aspects **[1]**
EVSE 5310 Environmental Sciences -Chemical Aspects **[1]**
EVSE 5311 Environmental Sciences -Geological Aspects **[1]**

[1] Students with less than 20 undergraduate hours in biology, chemistry, or geology will need to take a third environmental systems course as a deficiency. Students entering with a BS degree in one of these areas must take their two courses in the other areas.

One of the following three courses in City and Regional Planning (3 Hours)

CIRP 5342 Environmental Policy
CIRP 5343 Foundations of Environmental Policy
CIRP 5351 Techniques of Environmental Assessment

Thesis Option: In addition to the core courses listed above, the minimum requirements for the master's degree with thesis include:

9 hours of electives within one of the following departments: Biology, Chemistry, Earth and Environmental Sciences, Civil and Environmental Engineering, or Urban and Public Affairs
6 hours of additional electives
2 hours of EVSE seminar
6 hours thesis and the successful defense of the thesis before the supervising committee.

Non-thesis Option: In addition to the core courses listed above the minimum requirements for the master's degree without thesis include:

9 hours of electives within one of the following departments: Biology, Chemistry, Earth and Environmental Sciences, Civil and Environmental Engineering, or Urban and Public Affairs
12 hours of additional electives **[2]**
2 hours of EVSE seminar
Successful completion of the Master's Comprehensive Examination in the final semester.

[2] Must include at least 6 hours in department(s) outside that in which the first 9 hours of electives are taken.

The Geoscience Option:

Engineering (3 hours)
CE 5321, or **IE 3312**, or advisor approved.

Outside Science (3 hours)

EVSE 5309, or **EVSE 5310**, or advisor approved.

Seminar (2 hours

GEOL 5199 or **EVSE 6100**

Thesis Option: In addition to the core courses listed above the minimum requirements are:

Advisor approved electives (18 hours)

Geol 5698 Thesis (6 hours)

Non-Thesis Option: In addition to the core courses listed above the minimum requirements are:

Advisor approved electives (27 hours)

Environmental Science Professional Option: The minimum requirements for the Professional Options include:

Engineering (6 hours)

IE 3312, and **CE 5321**.

Two of the following courses in science (6 hours):

EVSE 5309 Environmental Sciences-Biological Aspects **[1]**
EVSE 5310 Environmental Sciences -Chemical Aspects **[1]**
EVSE 5311 Environmental Sciences -Geological Aspects **[1]**

[1] Students with less than 20 undergraduate hours in biology, chemistry, or geology will need to take a third environmental systems course as a deficiency. Students entering with a BS degree in one of these areas must take their two courses in the other areas.

One of the following three courses in City and Regional Planning (3 Hours)

CIRP 5342 Environmental Policy
CIRP 5343 Foundations of Environmental Policy
CIRP 5351 Techniques of Environmental Assessment

Professional Courses (4 hours)

EVSE 5120, Environmental Professional Mentoring and Business Ethics (2 semesters).
EVSE 5315, Professional Experience
EVSE 5395, Master's Project

Other Electives (15 hours)

9 hours of electives within one of the following departments: Biology, Chemistry, Earth and Environmental Sciences, Civil and Environmental Engineering, or Urban and Public Affairs
6 hours of additional electives

The Petroleum Geoscience Professional Option: The minimum requirements for the Petroleum Geoscience Professional Option include:

Engineering (3 hours)

IE 3312, or advisor approved.

Science (3 hours):

EVSE 5309 or EVSE 5310 or advisor approved.

Professional Courses (2 hours)

GEOL 5180 or EVSE 5110, Environmental Professional Mentoring and Business Ethics.
GEOL 5190, Professional Experience

Other courses (24 hours):

GEOL 5345 Petroleum Geology
GEOL 5369 Sequence Stratigraphy
GEOL 5371 Basin Modeling
GEOL 5372 Structural Geometry and Tectonics of Petroleum Fields
GEOL 5374 Seismic Interpretation
GEOL 5375 Introduction to Well Log Interpretation and Mapping
GEOL 5698 Thesis

Dual Degree Program

Dual master's degrees can be arranged with any suitable program. By participating in a dual degree program, students may apply 6-18 total semester credit hours jointly to meet the requirements of both degrees, thus reducing the total number of hours which would be required to earn both degrees separately. The number of hours which may be jointly applied ranges from six to 18, subject to the approval of Graduate Advisors from both programs. Degree plans, thesis or professional report proposals and programs of work must be approved by Graduate Advisors from both programs. The successful candidate will be awarded both degrees rather than one joint degree.

To participate in the dual degree program, students must make separate application to each program and must submit a separate program of work for each degree. Those interested in the dual degree program should consult the appropriate Graduate Advisors for further information on course requirements. See also the statement on Dual Degree Programs in the general information section of this catalog.

Arrangements to offer a dual degree have already been made between Environmental and Earth Sciences and the Program in City and Regional Planning (M.C.R.P. degree), School of Urban and Public Affairs.

Environmental and Earth Sciences Doctoral Degree

The Doctoral Program provides students with the interdisciplinary knowledge and skills to conduct independent research in Environmental and Earth Sciences. Students conduct dissertation research under the supervision of a faculty member in one of the participating departments (Biology, Chemistry, Earth and Environmental Sciences, Civil and Environmental Engineering, or Urban and Public Affairs). The supervising professor and a faculty committee assign courses in this primary area of emphasis to support the student's research and professional goals. To provide interdisciplinary training, additional courses are assigned in a secondary area of emphasis.

If they have not already done so in their previous work, all Doctoral students must take two engineering courses; two or three science courses (two if their prior training is in science, three if in engineering or another non-science field); and one course in policy or planning.

Students who enter the Doctoral Program with a Master's degree in a science or engineering field, or with 30 semester hours of graduate coursework, take a Diagnostic Examination In the first year of residence to evaluate this previous work. The student's supervising committee must approve all courses taken to meet degree requirements.

Students who enter the Doctoral Program with a Bachelor's degree take 30 semester hours of graduate coursework that includes Engineering, Science and Public Policy courses. These students are encouraged to take the diagnostic exam in their first year of enrollment. The student's supervising committee must approve all courses taken to meet degree requirements.

Students may choose among any of the five participating units for their primary and secondary areas of emphasis. Course selection within these areas of emphasis is guided by the student's supervising committee and must result in a cohesive program that supports the dissertation research.

Other requirements include:

1. Successful completion of the Diagnostic Examination at the end of the first year of residence.
2. Successful completion of the Comprehensive Examination, an oral defense of a research proposal to be pursued for the dissertation, and a specialization examination over areas of the student's proposed research.
3. Demonstration of proficiency in one foreign language or a research tool such as advanced computer skills, statistics, or operations research.
4. Successful defense of the dissertation and acceptance of the dissertation by the supervising committee.