

Environmental Science Courses

Courses

ESCI 5101. Graduate Seminar.

Graduate Seminar (1-0) Presentation and discussion of topics in environmental science and engineering by graduate students, faculty and visitors.

Prerequisite: Enrollment in the MS program in Environmental Science.

1 Credit Hour

1 Total Contact Hour

0 Lab Hour

1 Lecture Hour

0 Other Hour

ESCI 5307. Arid Lands.

Scientific review of Earth's dry environments. Factors investigated include geography, climate, weather, water, landforms, geology, soils, plants, animals, and ecosystems drylands, desertification, and human occupation and utilization of desert and semidesert environments.

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

ESCI 5308. Climate Science.

A synthesis of Earth's climate system. Areas of emphasis include: (1) scientific foundations of the study of Earth's climate system, climate dynamics and climate change, (2) basic understandings of Earth's climate system as a part of the overall Earth system and Earth's place in the solar system, (3) geological and instrumental record of climate, (4) human impacts on the climate system, including human vulnerability and response to climate change, and (5) contextualization of Earth's current climate with that of its geological past.

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

ESCI 5310. Interd Envirom Problem Solving.

Interdisciplinary Environmental Problem Solving Students with different backgrounds will work in teams to examine interdisciplinary environmental issues specific to the far west Texas border region and prepare a group report with recommendations, which consider scientific, political, economic, and social aspects.

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

ESCI 5315. Topics in Environmental Sci..

Topics in Environmental Science (3-0) Study of topics in fields such as environmental geology, environmental chemistry, environmental biology, environmental justice, environmental health, physics, hydrology and environmental law. May be repeated when topics vary.

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

ESCI 5320. Regional Water Sustainability.

Regional Water Sustainability In this graduate-level course multiple projects are designed to understand and solve local and regional environmental problems that are water-related. Through hands-on experiences, field trips and guest lectures, students will be trained to collect data using state-of-art instruments and techniques, analyze their own data as well as larger, more complex datasets, and understand the importance of water resources in societal stability.

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

ESCI 5398. Thesis Research I.

Thesis Research I (0-0-3) Initial work on the thesis.

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

0 Lecture Hours

3 Other Hours

ESCI 5399. Thesis Research II (0-0-3).

Thesis Research II (0-0-3) Continuous enrollment required while work on thesis continues.

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

0 Lecture Hours

3 Other Hours

Prerequisite(s): (ESCI 5398 w/P or better)

ESCI 5401. Environmental Biology.

Environmental Biology (3-3) Examination of the relationship between biological and physical environments. Topics will include ecology and biogeochemical cycles.

4 Credit Hours

6 Total Contact Hours

3 Lab Hours

3 Lecture Hours

0 Other Hours

ESCI 5402. Environmental Chemistry.

Environmental Chemistry (3-3) Physical and chemical processes influencing the behavior of contaminants in the air, water and soil. Includes acidity, basicity, redox properties, solubility, partitioning and transport in the environment. The laboratory will emphasize analytical protocols utilized in environmental laboratories.

4 Credit Hours

6 Total Contact Hours

3 Lab Hours

3 Lecture Hours

0 Other Hours

ESCI 5403. Environmental Geology.

Environmental Geology (3-3) Addresses the relation of earth sciences to environmental issues. Topics will include geohazards, engineering geology, ground and surface water, erosion, geochemistry, and global change. Local and national problems in environmental geology will be highlighted. The laboratory will emphasize analysis of earth materials, mapping, and problem solving.

4 Credit Hours

6 Total Contact Hours

3 Lab Hours

3 Lecture Hours

0 Other Hours