

# EEPS - Earth, Environmental and Physical Sciences

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Courses numbered 500 to 799 = *undergraduate/graduate*. (Individual courses may be limited to undergraduate students only.) Courses numbered 800 to 999 = *graduate*.

## **EEPS 700. Technical Sessions (1).**

Through seminar presentations by students, faculty and guest lectures, students critically analyze essential elements and skills of effective oral presentation of scientific research methodology, data and results to audiences of diverse backgrounds; learn techniques of effective use of visual display media, presentation styles and speaker-audience interactions. Must be taken for two semesters for maximum of 2 credit hours toward the degree. Prerequisite(s): graduate standing or instructor's consent.

## **EEPS 701. Computer Methods in Science (3).**

Cross-listed as GEOL 690AJ. Surveys computer applications commonly used by scientists, emphasizing nonstatistical applications. Includes computer-assisted instruction, data management, presentation packages, internet resources, digital image analysis, graphics and spreadsheets, reference acquisition and management, desktop publishing, and specialized applications for modeling, simulations, mapping and time-series analysis. Lectures and demonstrations involve individual hands-on activities and student projects. This course has a lab component. Prerequisite(s): graduate standing or instructor's consent.

## **EEPS 702. Research Methods (3).**

The primary goal of this course is to investigate research methods and tools used in science and their specific applications in geology. Participants learn to write and orally present a research proposal and also gain experience in constructively critiquing each other's work. Prerequisite(s): graduate standing or instructor's consent.

## **EEPS 710. Great Discoveries and Controversies in Science (3).**

Foundation, history and insights that led to great discoveries in various scientific fields, and which caused great and continuing controversies in scientific theory, the advancement of science, and lessons and perspectives to be learned for future scientific research. Course involves lectures, seminars, literature research, essay writing and presentation by students. Prerequisite(s): graduate standing or instructor's consent.

## **EEPS 720. Scientific Writing (1).**

Procedure, organization, format and style of a variety of technical and scientific publication vehicles, such as abstracts, professional journal articles, government and industrial reports and paper and book reviews. Essential elements and skills of effective scientific written communication. Must be taken in conjunction with any course (except EEPS 889 and 890) that requires extensive writing. Repeatable for a total of 2 credit hours toward the degree. Prerequisite(s): EEPS 700.

## **EEPS 721. Current Issues in Global Environmental Science (3).**

Introduces and uses basic concepts relating to ecosystems, habitats, environments and resources as a basis for understanding environmental problems at different spatial and temporal scales. An interdisciplinary approach frames these problems to facilitate understanding of inter-relationships required for environmental analysis, remediation and management. Prerequisite(s): EEPS 710 or instructor's consent.

## **EEPS 845. Space Science Foundations (3).**

Cross-listed as PHYS 845. Presents an understanding of the extreme special conditions encountered in space. Introduces the heliopause formed by the protective bubble of the sun, which starts as a solar wind, and how spacecrafts or planets survive this special space environment. Studies ideas on propulsion, launch trajectories and orbital principles.

Introduces spacecraft systems, communications, navigation and design principles necessary to successfully transverse space. Presents astrobiology and the special space environment that creates especially difficult hardships to which life in space must adapt in order to survive. Introduces space ethics and laws set forth by international treaties. Prerequisite(s): PHYS 795 or GEOL 795.

## **EEPS 889. Internship (1-6).**

Students may gain interdisciplinary skills by participating in applied and/or basic research internship projects with local business, industry or government agencies. Enrollment in internship projects requires an approved proposal. Completion of an internship for graduation requires a formal oral presentation of the internship activity and a written report. For students choosing the internship option. Repeatable for credit. Enrollment is limited to 3 credit hours before a student's internship proposal is approved. Prerequisite(s): consent of internship supervisor.

## **EEPS 890. Thesis (1-6).**

For students choosing the thesis option. Repeatable for credit. Enrollment is limited to 3 credit hours before a student's thesis proposal is approved. Prerequisite(s): EEPS 720 and consent of thesis supervisor.