

# Environmental Dynamics (ENDY)

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## Courses

### **ENDY 5053. Quaternary Environments. 3 Hours.**

An interdisciplinary study of the Quaternary Period including dating methods, deposits soils, climates, tectonics and human adaptations. (Typically offered: Fall)  
This course is cross-listed with ANTH 5053, GEOS 5053.

### **ENDY 5113. Global Change. 3 Hours.**

Examines the interacting natural and anthropogenic factors involved in global change, concentrating on climate variability and change. Prerequisite: Graduate standing or instructor's approval. (Typically offered: Spring)  
This course is cross-listed with GEOS 5113.

### **ENDY 5653. GIS Analysis and Modeling. 3 Hours.**

Unlike conventional GIS courses that focus on studying "where", this course will teach students to address beyond "where" using various GIS analysis and modeling techniques to explore "why" and "how". The course will provide theoretical and methodological reviews of the principles of cartographic modeling and multi-criteria decision-making. Students will receive degree credit for only one of ENDY 5653, GEOS 5653, or ANTH 5653. (Typically offered: Spring)  
This course is cross-listed with GEOS 5653.

### **ENDY 5853. Environmental Isotope Geochemistry. 3 Hours.**

Introduction to principles of isotope fractionation and distribution in geological environments isotopic analytical methods, and extraction of isotope samples; application of isotopes in characterization of geologic processes and interaction with hydrologic, surficial, and biologic attenuation, paleothermometry soil and biochemical processes. (Typically offered: Spring)  
This course is cross-listed with GEOS 5853.

### **ENDY 600V. ENDY Thesis Research. 1-6 Hour.**

Master's Thesis. May be repeated for degree credit. (Typically offered: Fall, Spring and Summer) May be repeated for up to 6 hours of degree credit.

### **ENDY 6013. Environmental Dynamics. 3 Hours.**

Required course for ENDY doctoral candidates. Overview of Earth Systems: Lithosphere; Hydrosphere, Atmosphere, Biosphere, Cryosphere, and human interaction across Earth systems. Emphasis on understanding of processes within Earth systems and interactions across Earth Systems as they pertain to global self-regulation, secular variation, climate stability, development and sustainability of human societies. Prerequisite: Graduate standing. (Typically offered: Fall)

### **ENDY 602V. Current Topics Seminar. 1-2 Hour.**

Various aspects of the environment will be explored through topic specific seminars. Subject matter will change each semester addressing current environmental issues and research. Seminars will be one or two hours credit. Prerequisite: Graduate standing. (Typically offered: Irregular) May be repeated for up to 6 hours of degree credit.

### **ENDY 6033. Society and Environment. 3 Hours.**

This course examines the complex interrelationships between human societies and the natural environment. Drawing on diverse and interdisciplinary perspectives in archaeology, ethnography, history, geography, and palaeo-environmental studies, readings and discussion will explore the co-production of social and environmental systems over time. (Typically offered: Spring)  
This course is cross-listed with ANTH 6033.

### **ENDY 689V. Special Problems in Environmental Dynamics. 1-6 Hour.**

Independent study of a topic related to environmental dynamics under the guidance of an ENDY faculty member. (Typically offered: Fall, Spring and Summer) May be repeated for up to 12 hours of degree credit.

### **ENDY 6991. Environmental Dynamics Colloquium. 1 Hour.**

Weekly meetings for discussion of current research in environmental dynamics. Graduate students must register for colloquium each semester during their first three semesters. Colloquium credit does not count towards minimum hours required for the doctorate. Prerequisite: Graduate standing. (Typically offered: Fall and Spring) May be repeated for up to 20 hours of degree credit.

### **ENDY 700V. Doctoral Dissertation. 1-18 Hour.**

Doctoral dissertation. Prerequisite: Graduate standing. (Typically offered: Fall, Spring and Summer) May be repeated for degree credit.