

# Environmental Dynamics (ENDY)

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## Courses

### **ENDY 50503. 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 50503, GEOS 50503.

### **ENDY 51103. 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 51103.

### **ENDY 56503. 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 56503 or GEOS 56503. (Typically offered: Spring)  
This course is cross-listed with GEOS 56503.

### **ENDY 58503. 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 58503.

### **ENDY 6000V. 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 60103. 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 6020V. 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 60303. 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 60303.

### **ENDY 6890V. 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 69901. 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 7000V. Doctoral Dissertation. 1-18 Hour.**

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