

## UMBC UGC New Course Request: GES 404 - Forest Ecology

Date Submitted: 4/24/09

Proposed Effective Date: 4/24/09

	name	email	phone	dept
dept chair	Sandy Parker	<a href="mailto:eparker@umbc.edu">eparker@umbc.edu</a>	5-3153	GES
contact	Matthew Baker	<a href="mailto:mbaker@umbc.edu">mbaker@umbc.edu</a>	5-3759	GES

### COURSE INFORMATION:

course number(s)	GES 404
formal title	Forest Ecology
transcript title (≤24c)	Forest Ecology
prerequisite	GES 308 OR BIO 301
credits	3
max. repeat credits	
grading method(s)	<input checked="" type="checkbox"/> Reg (A-F) <input type="checkbox"/> Audit <input type="checkbox"/> Pass-Fail

### PROPOSED CATALOG DESCRIPTION:

A field-intensive course emphasizing forested landscape ecosystems and plant species of the Mid-Atlantic. Our challenge is to understand ecosystems, their physical and biotic characteristics, their relationship to one another in the field, successional trends, and selected aspects of their functioning. This course will stress forest species, and especially (1) field identification and characteristic habitats, (2) establishment ecology, (3) competitive and mutualistic relationships, (4) occurrence and diversity related to habitat conditions, (3) establishment and occurrence in relatively undisturbed (by humans) and disturbed environments, and (6) genetic and non genetic variation of populations, as well as adaptation to specific environments.

### RATIONALE FOR NEW COURSE:

No course like this exists at the school. Provides an important element currently missing within the Geography and Environmental Science Curriculum. May also be of interest to biology students.

### ATTACH COURSE OUTLINE

#### Course Description

A field-intensive course emphasizing forested landscape ecosystems and plant species of the Mid-Atlantic. Our challenge is to understand ecosystems, their physical and biotic characteristics, their relationship to one another in the field, successional trends, and selected aspects of their functioning. This course will stress forest species, and especially (1) field identification and characteristic habitats, (2) establishment ecology, (3) competitive and mutualistic relationships, (4) occurrence and diversity related to habitat conditions, (3) establishment and occurrence in relatively undisturbed (by humans) and disturbed environments, and (6) genetic and non genetic variation of populations, as well as adaptation to specific environments.

#### Prerequisites

GES 308 OR BIO 301

**Course Text**

Barnes, Denton, Zak, and Spurr. 1998. "Forest Ecology". Wiley.

**Course Objectives**

1. Critically examine ecological principles in a variety of field situations.
2. To think holistically about landscape ecosystems rather than single factors such as plants or soil.
3. To learn how to distinguish and analyze forest ecosystems in a systematic fashion, including plant identification and soil assessment.
4. To understand niche relationships of forest species and the genetic and physiological basis of these relationships.
5. To examine the impact of disturbance caused by anthropogenic activity on the abiotic environment, community composition, and species populations.
6. To learn field and lab skills in sampling forested ecosystems and analyzing the data collected.

**Evaluation**

There will be two in class examinations and a final. In addition, there will be two outdoor laboratory examinations and weekly quizzes.

**Laboratory**

This class will emphasize performance in the field, so students should come to lab periods prepared to spend class period outside, regardless of weather conditions.