

## **Environmental Education**

**11:704:416**

Rebecca Jordan

Fall & Spring, Wednesdays 2:15-5:00p, Waller Hall Room 203

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### **CONTACT INFORMATION:**

Office: Waller Hall 104

Office hours: TBA

Office phone: (848) 932-9164

Email: [jordan@aesop.rutgers.edu](mailto:jordan@aesop.rutgers.edu)

### **COURSE MATERIALS:**

Website:

<http://sakai.rutgers.edu>

To be provided in class:

Handouts and Manuals from EE Orgs.

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### **COURSE DESCRIPTION:**

An opportunity to foster ideas and discussion about environmental and scientific literacy while developing plans to target and assess learning goals for all audiences.

*Participants in this course will:*

- \*Gain insight into both environmental issues and the issues surrounding environmental education
- \*Develop ways to incorporate environmental education into formal and informal learning environments
- \*Discuss how to better teach environmental and science literacy and life-long science learning skills

### **LEARNING OBJECTIVES:**

A. Students will be able to describe the major goals of environmental education (resulting in an ability to take action toward environmental sustainability) as:

- 1.) Motivating a desire to become active in environmental sustainability.
- 2.) Promoting foundational knowledge about the science (social, biological, physical, etc.) behind understanding environmental issues.
- 3.) Promoting issue awareness skills.
- 4.) Providing an ability to act toward environmental sustainability.

B. Students will be able to identify numerous resources available to help you incorporate EE (environmental education) into your instruction.

C. Students will be able to employ a systematic method to collecting data about their teaching and use this information to modify their practice (action research).

D. Students will be able to use the environment as a motivating context by which important scientific ideas can be taught.

E. Students will gain practice in employing sound science teaching techniques by thinking critically about the following themes: Argumentation, Empathy, and Synthesis in the context of these questions:

- 1.) What is my point?
- 2.) How do I know what I know?

### **CORRELATION TO SEBS LEARNING GOALS:**

TBA

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## ASSIGNMENTS/RESPONSIBILITIES & ASSESSMENT:

As an understanding of the complexity and nature of environmental issues is critical to the effective use of environmental issues in science education, students will be held responsible for the environmental content as well as the pedagogical content covered in this course (Letters correspond to goals listed above).

Students will be expected to:

- Complete 2 quizzes (dates will be announced-no make-ups w/o prior arrangement)  
Covering the major goals of environmental education and resources for instruction (A and B)
- Complete 6 single page Assignments  
Covering aspects of critical thinking in the context of current environmental issues  
(critical thinking will integrate skill in Argumentation, Empathy, and Synthesis) (E)
- Participate in 3 Teaching/Learning projects that combine both and oral and written presentation of material  
Covering systematic teacher practices and motivating students (C and D)
- Fill out reflective journal entries and keep a materials binder to help students use materials/skills obtained and learned in this course in future teaching ventures.  
Covering systematic teacher practices (C)
- Final Summative Paper (2 page letter)—In place of a final exam  
Covering major goals of environmental education and resources for instruction (A and B)

### *Assessment Distribution:*

Journal (5%) Quizzes (10%), Thought Papers (30%), Projects (50%), Final Paper (5%)

### *Disclaimer:*

*This course is NOT a comprehensive review of environmental issues, nor is it a comprehensive review of science teaching strategies. This course is intended to encourage you to think critically about teaching as a practice through the lens of environmental education. I STRONGLY encourage you to keep a notebook or box where you can store your materials until you begin classroom teaching.*

### Assessment scale:

Grade scale: 100-90%= A, 87-89%= B+, 80-87%= B, 77-79%= C+, 70-75%= C, 66-69%= D+, 60-65%= D, <60%= F. Note: All assignments are due at 3 pm on the due date. 5% will be deducted for each day that the assignment is late. No extra credit will be awarded, but students are encouraged to submit work early for initial comments. To be fair, I ask that any requests for a grade change or make-up (projects only and in advance) must be in writing. Grade is based on mastery, not on a curve. Please note that plagiarism will not be tolerated—always provide your sources!

## OTHER INFORMATION:

It is important that students have the tools to succeed in this course. Please see the instructor \*as soon as possible\* with any difficulties or questions regarding the course materials. In addition student affairs (<http://studentaffairs.rutgers.edu/>) for any needs or concerns.

## COURSE SCHEDULE:

Provided below.

NOTE: The fall and spring schedule are very similar with the exception of outdoor activities which are planned for early in the fall or later in the spring.

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## FALL COURSE SCHEDULE

<b>Class:</b>	<b>Assignment due</b>	<b>Purpose of the day</b>	<b>Course Goals</b>
<b>1</b>	<b>None</b>	Introductions, establish goals for environmental education and discuss strategies for changing learner behavior.	A, B
<b>2</b>	<b>Assignment 1</b>	Discuss best practices in teaching, and consider the parallels between the content we teach our students and the practice that we as teachers engage in.	A, B
<b>3</b>	<b>Assignment 2</b>	We will go outside. We will discuss using the outdoors as a classroom. We will discuss the parallels between authentic inquiry experiences and foundational awareness in EE.	A, B, E
<b>4</b>	<b>Field trip: Helyar</b>	To address a major issue in EE—promoting concern for the environment. Engage in activities supported by NJ Audubon and Jane Goodall Institute (excellent resources!). You'll also have the opportunity to play with teaching equipment.	A, B, E
<b>5</b>	<b>Quiz 1</b>	Given that we've considered motivation, and inquiry skills, we will now consider issue investigation and resolution skills. We will discuss rubrics as we consider the best practices for the development of EE learning units.	A, B, E
<b>6</b>	<b>Written Assignment Due—be prepared to share</b>	We will also consider evidence of meeting ones goals; or classroom assessment. We will focus again on rubrics and plan mini teacher exercises.	C, D
<b>7</b>	<b>Microteaching</b>	This is your chance to tie together what we've learned about EE and science instruction. It should be fun!	C, D, E
<b>8</b>	<b>Journal 1</b>	During the next 3 weeks, we will hear from various EE professionals from around the state. We will take this time to consider the best practices in EE and whether these programs will help us to meet needs.	B
<b>9</b>	<b>Assignment 3</b>	Same as above	B
<b>10</b>	<b>Assignment 4</b>	Same as above	B
<b>11</b>	<b>Journal 2; Assignment 5</b>	Hopefully you'll see how science instruction is conducive to EE. You'll have the opportunity to play with teaching equipment.	C, D, E
<b>12</b>	<b>EE unit presentations Quiz 2</b>	This is a chance for you to practice implementing EE into your classroom. This is another opportunity to tie together what we've learned about EE and science instruction, you will work with a group.	C, D
<b>13</b>	<b>Assignment 6</b>	Here we will consider the final component of EE; taking action. We will address large issues and grapple with the fact that we are only good as Env. Educators if we know about the issues that face our environment.	A, B
<b>14</b>	<b>Final Exam due</b>	We will have the opportunity to discuss teaching with a classroom teacher and environmental educator. We will also consider professional development needs.	A, B, C, D, E
<b>Final Exam</b>		This will be your opportunity to tie everything we've done for the course. This will be a take home.	A, B, E

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## SPRING COURSE SCHEDULE

<b>Class:</b>	<b>Assignment due</b>	<b>Purpose of the day</b>	<b>Course Goals</b>
<b>1</b>	<b>None</b>	Introductions, establish goals for environmental education and discuss strategies for changing learner behavior.	A, B
<b>2</b>	<b>Assignment 1</b>	Discuss best practices in teaching, and consider the parallels between the content we teach our students and the practice that we as teachers engage in.	A, B
<b>3</b>	<b>Assignment 2</b>	Given that we've considered inquiry skills, we will now consider issue investigation and resolution skills. We will discuss rubrics as we consider the best practices for the development of EE learning units.	A, B, E
<b>4</b>	<b>Written Assignment Due—be prepared to share</b>	We will also consider evidence of meeting ones goals; or classroom assessment. We will focus again on rubrics and plan mini teacher exercises.	C, D, E
<b>5</b>	<b>Microteaching</b>	This is your chance to tie together what we've learned about EE and science instruction. It should be fun!	C, D, E
<b>6</b>	<b>Journal 1</b>	During the next 3 weeks, we will hear from various EE professionals from around the state. We will take this time to consider the best practices in EE and whether these programs will help us to meet needs.	B
<b>7</b>	<b>Assignment 3</b>	Same as above	B
<b>8</b>	<b>Assignment 4</b>	Same as above	B
<b>9</b>	<b>Assignment 5</b>	Hopefully you'll see how science instruction is conducive to EE. You'll have the opportunity to play with teaching equipment.	C, D, E
<b>10</b>	<b>EE unit presentations Quiz 2</b>	This is a chance for you to practice implementing EE into your classroom. This is another opportunity to tie together what we've learned about EE and science instruction, you will work with a group.	C, D
<b>11</b>	<b>Journal 2</b>	Here we will consider the final component of EE; taking action. We will address large issues and grapple with the fact that we are only good as Env. Educators if we know about the issues that face our environment.	A, B
<b>12</b>	<b>Field trip: Helyar</b>	To address a major issue in EE—promoting concern for the environment. Engage in activities supported by NJ Audubon and Jane Goodall Institute (excellent resources!). You'll also have the opportunity to play with teaching equipment.	A, B, E
<b>13</b>	<b>Assignment 6</b>	We will go outside. We will discuss using the outdoors as a classroom. We will discuss the parallels between authentic inquiry experiences and foundational awareness in EE.	A, B, E
<b>14</b>	<b>Final Exam due</b>	We will have the opportunity to discuss teaching with a classroom teacher and environmental educator. We will also consider professional development needs.	A, B, C, D, E
<b>Final Exam</b>		This will be your opportunity to tie everything we've done for the course. This will be a take home.	A, B, E

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