EVR 3013 - ECOLOGY OF SOUTH FLORIDA
Spring 2010 MWF 1-1:50 PM
ROOM: CP 151

Instructor: Jim Riach riachj@fiu.edu
Office hours: TuThu :11 AM-12 PM; Th: 2-4 PM; MW: 10 AM-12PM
Office: ECS 335

Course Description: The course introduces the student to ecological principles and to the South Florida environment. Students will learn to apply the ecological principles to explain the processes that have influenced the existence of plants and animals within South Florida from ancient to present times. The main biological and physical features of South Florida as a whole and which distinguish its diverse environments will be described and explained. The course will analyze how humans have used and impacted the different environments of South Florida since the times of their earliest occupation of the region. Students will participate in discussions of current debates of environmental issues concerning the South Florida ecology.

After successfully completing this course, the students will be able to:

- Define, apply, and use ecological principles to explain processes that affect the distribution and abundance of plants and animals in South Florida;
- Identify the main biological and physical features of South Florida and its diverse environments;
- Explain how different environments within South Florida were formed and are changing due to natural and human-driven processes;
- Explain ongoing debates of environmental issues affecting South Florida;
- Determine if and how various economic and recreational human activities may be affecting the ecology and/or wildlife of South Florida; and
- Describe and analyze different views regarding how best to protect and/or restore the South Florida environment.

CE6: This as a web-assisted course. All students will be assigned a CE6 account for online access to the course, which will contain review quizzes, online reading materials, lecture supplements, professor e-mail access, assignment submission tools, and suggested links.

Textbooks:


Recommended:

Grading:
Exam I  20
Exam II  20
Exam III  20
Env Scavenger Hunt (4x)  20  (four @  5 pts each)
In-Class Activities  20
Total  100

Video Project (in place of 1 exam)  20 (can replace 1 exam above)
CE 6 Review Quizzes  NONE
Grades are based on the following percentages

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<tr>
<th>Grade</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>A</td>
<td>94-100</td>
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<td>A-</td>
<td>90-93</td>
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<tr>
<td>B+</td>
<td>87-89</td>
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Exams: There will be two non-cumulative exams during the semester. Exams will cover material from the readings and lecture. Lectures will not duplicate the material found in the readings, so class attendance is essential for a good grade in the exams. Several movies may be shown in class. Content from the movies may appear on the exams. If you miss class on a day a movie is shown, it is your responsibility to get notes from a classmate and/or try to see it.

Ecological Scavenger Hunt: Students will be required to participate in a total of 5 scavenger hunts throughout the semester. These hunts will require that students go to different areas around campus, complete an on-site assignment, and obtain information and artifacts from these locations. To receive a grade for the hunt, students will have to complete an online assessment for each of the scavenger hunts and may also be requested to bring to class the artifacts that they collected.

In-Class Activities: Several GRADED activities will take place during class time. These activities will be UNANNOUNCED and will be related to the content of that day's lecture topic or reading assignment (so have notes and readings with you in class). There are NO MAKE-UPS for these activities. Failure to participate in any activity will earn you a zero for that activity.

Optional Video Project
Students will be able to opt out of taking one exam in exchange for creating a 3-5 minute video addressing some of the issues covered in class. Further details will be discussed in class. There will be one in-class video project workday to help students organize their video projects. Students working on videos will be required to attend the in-class video project workday. Students who miss the workday will be required to take all three exams.

Review Quizzes: Short non-graded, quizzes based on lecture, the textbook readings, and online content will be posted on CE6. Students will have up to 3 attempts to take the quizzes as review for upcoming exams. Students will have 20 minutes to complete each attempt of the quizzes.

Extra Credit: FIU Environmental Preserve work days. Points will be added to the final grade for the semester according to the following guidelines. One full day = 5 points; Half-day = 2.5 points. Less than half day = 1.3 points. No more than 5 points will be given as extra credit for the semester.

Academic Misconduct
All students are expected to honor the following pledge
Pledge - As a student of this university:
- I will be honest in my academic endeavors.
- I will not represent someone else’s work as my own.
- I will not cheat, nor will I aid in another’s cheating.

All students are deemed by the University to understand that if they are found responsible for academic misconduct, they will be subject to the Academic Misconduct procedures and sanctions, as outlined in the Student Handbook.

Procedure
All matters relating to academic misconduct are referred to the Office of the Provost for Academic Affairs. Acts of academic misconduct may be alleged by faculty, staff or students. Two actions that may be taken are:
- Expulsion: Permanent separation of the student from the University, preventing readmission to the institution. This sanction shall be recorded on the student's transcript.
- Suspension: Temporary separation of the student from the University for a specific period of time.
I. BACKGROUND

Week One: January 4-8
1/4: Introduction and Basic Ecological Concepts
   Textbook Readings: Callenbach: ecology, biodiversity
   Corresponding CE6 content:
      Ecological Concepts and Principles: Part I.doc
   1/6-1/8: South Florida Geological History
   Textbook Readings: Lodge: Chapter 1; Callenbach: evolution, succession
   Corresponding CE6 content:
      Geoworld
      Prehistory
      Geochart

Week Two: January 11-15
1/11-1/13: Prehistoric Biogeography
   Textbook Readings:
      Callenbach; bioregion, community, ecosystem
      Prehistoric Biota
1/15: Physiographic Regions, Ecosystem Overview, and Historical Everglades
   Textbook Readings: Lodge: Chapter 2; Callenbach: habitat, population, species, food web, interdependence, niche, predation, symbiosis
   Corresponding CE6 content:
      Ecoconcepts: Part II
      Physiographic Regions 1-3
      Climate
      South Florida Ecosystems

Week Three: January 18-22
1/18: Martin Luther King Birthday Holiday - No Classes
1/20: Physiographic Regions, Ecosystem Overview, and Historical Everglades continued
1/22: Video Project Work Day
   Ecological Scavenger Hunt #1 assigned: Due 1/29 @ 1 PM

II. SOUTH FLORIDA ENVIRONMENTS

Week 4: Jan 25-29
1/25: Upland Ecosystems (1) Hammocks
   Textbook Readings: Lodge: Chapter 5
   Corresponding CE6 content:
      Hammocks
      Hammock species list
1/27: No class
1/29: Upland Ecosystems (1) Hammocks continued

Week 5: February 1-5
2/1-2/5: Upland Ecosystems (2) Pine Rocklands and Flatwoods
   Textbook Readings: Lodge: Chapter 6; Callenbach: fire
   Corresponding CE6 content:
      Pine rockland
      Pine flatwood
      Pine rockland species list
      Pine flatwood species list
Week 6: February 8-12

2/8: EXAM I

2/10: Ecological Scavenger Hunt #2 assigned: Due 2/17 @ 1 PM

2/10-2/12: Freshwater Wetland Ecosystems (1)
Marshes and Wet Prairies
   Textbook Readings: Lodge: Chapter 3
   Corresponding CE6 content:
      Marshes
      Wet Prairies
      Marshes species list

Week 7: February 15-19

2/15: Freshwater Wetland Ecosystems (1) continued
Tree Islands and Aquatic Marsh Ecosystems
   Textbook Readings: Lodge: Chapter 4
   Corresponding CE6 content:
      Wetland Tree Islands
      Aquatic Marsh Ecosystems

2/17-2/19: Freshwater Wetland Ecosystems (2)
Swamps
   Textbook Readings: Lodge: Chapter 7
   Corresponding CE6 content:
      Swamps
      Swamp species list

Week 8: February 22-26

2/22: Ecological Scavenger Hunt #3 assigned: Due 3/1 @ 1 PM
2/22-2/26: Coastal Ecosystems
Mangrove Swamps
   Textbook Readings: Lodge: Chapter 8
   Corresponding CE6 content:
      Mangroves
      Mangrove species list
Salt Marshes (and Hurricanes)
   Textbook Readings: Lodge: Chapter 9
   Corresponding CE6 content:
      Salt marshes
      Salt marsh species list

Week 9: March 1-5

3/1: Video research, storyboard, video draft due
3/1-3/5: Intertidal and Marine Ecosystems
Estuaries
   Textbook Readings: Lodge: Chapter 10
   Corresponding CE6 content:
      Estuaries
      Reefs

III: SOUTH FLORIDA FLORA AND FAUNA
Week 10: March 8-12

3/8: South Florida Fishes
South Florida Fishes
   Textbook Readings: Lodge: Chapters 14-15
   Corresponding CE6 content:
      Fish
3/10: **South Florida Amphibians and Reptiles**
South Florida Amphibians and Reptiles
   Textbook Readings: Lodge: Chapters 16-17
   Corresponding CE6 content:
   Amphibians and Reptiles

3/12: **EXAM II**

**Week 11: March 15 – 20 SPRING BREAK – NO CLASSES**

**Week 12: March 22-26**
3/22: **Ecological Scavenger Hunt #4 assigned: Due 3/29 @ 1 PM**
3/22-3/26: **South Florida Mammals and Birds**
South Florida Mammals
   Textbook Readings: Lodge: Chapter 18
   Corresponding CE6 content:
   Mammals
South Florida Birds
   Textbook Readings: Lodge: Chapter 19
   Corresponding CE6 content:
   Birds

**IV: HUMAN IMPACTS**

**Week 13: March 29-April 2**
3/29: **Final Video Projects Due**
3/29-4/2: **Humans and the Everglades Part 1**
   Textbook Readings: Lodge: Chapter 21 pp. 217-233; Callenbach: carrying capacity, conservation, extinction, impacts, land use, pollution, water
   Corresponding CE6 content:
   Archaeology
   Environmental History – FIU Everglades network
   Hydrology

**Week 14: April 5-9**
4/5-4/9: **Humans and the Everglades Part 2**
   Textbook Readings: Lodge: Chapter 21 pp. 233-254; Callenbach: restoration, sustainability, toxics, urban ecology, values, xeriscape, zoos
   Corresponding CE6 content:
   FIU Everglades Network
   Anthropogenic environment

**Week 15: April 12-16**
4/12: Video Presentations
4/14: **EXAM II**
4/16: Study Friday - No class