

**University of North Texas at Dallas**  
**Summer 2015**  
**SYLLABUS**

**BIOL5170D.090: Evolutionary Ecology: 3 Hrs**

**Department of Life and Health Sciences**

**School of Liberal Arts and Sciences**

**Instructor Name:** Dr. Irene T. Rodriguez  
**Office Location:** Room 253, Founders Hall (DAL2)  
**Office Phone:** 972-338-1525  
**Email Address:** irene.Rodriguez@untdallas.edu

**Office Hours:** MTWR 9:00 am - 10:00 am; or by appointment  
**Virtual Office Hours:** N/A

**Classroom Location:** DAL2 room 336  
**Class Meeting Days & Times:** MTWR 10:00 am – 11:50 am

**Course Catalog Description:** Principles that determine the distribution and abundance of organisms from an evolutionary perspective, including evolutionary genetics and speciation, and the application of the theory of natural selection in population ecology, interactions between populations, and applied biogeography.

**Prerequisites:** Admission to M. Ed. program or consent of instructor  
**Co-requisites:** None

**Required Texts:** Begon, M., R.W. Howarth, and C.R. Townsend. 2014. *Essentials of Ecology*. 4<sup>th</sup>. Edition. John Wiley and Sons, ISBN 978-0-470-90913-3  
 Pianka, E. R. 2011. *Evolutionary Ecology* -- eBook. Seventh Edition.

**Access to Learning Resources:** UNT Dallas Library:  
 phone: 972.338.1616  
 e-mail: [UNTDLibrary@unt.edu](mailto:UNTDLibrary@unt.edu)  
 web: <http://www.untdallas.edu/library>  
 UNT Dallas Bookstore:  
 phone: (972) 780-3652  
 e-mail: [untdallas@bkstr.com](mailto:untdallas@bkstr.com)  
 web: <http://www.untdallas.edu/bookstore>

**Course Goals or Overview:**

The goal of this course is to provide the student with a broad knowledge of ecological principles framed in an evolutionary perspective.

**Learning Objectives/Outcomes:**

1. Recognize the interaction of ecological and evolutionary principles in determining the distribution and abundance of organisms.
2. Understand speciation in its ecological context.
3. Understand how natural selection impacts population cycles (life tables, sexual selection, and kin selection).
4. Explain interactions between populations (competition, predation and symbiosis) and their evolutionary implications (coevolution).
5. Explain the application of biogeographic principles in conservation biology.
6. Critically read, analyze, and communicate (oral and written forms) primary scientific data and literature, engaging with others in thoughtful and well-crafted discussions.

**Assessment Plan:**

Student learning outcomes will be assessed by written review of primary literature, oral presentation and discussion of topics in evolutionary ecology, homework assignments, and course content examinations.

**Course Outline**

This schedule is subject to change by the instructor. Any changes will be communicated by the instructor in class.

WEEK	DATE	TOPIC
1	June 8-11	Introduction: Interaction of ecological and evolutionary principles
2	June 15-18	Population Genetics, Natural Selection and Speciation ----- EXAM 1
3	June 22-25	Population Ecology: Life tables, sexual selection, and kin selection
4	June 29-July 2	Interactions Between Populations: competition, predation, symbiosis, and coevolution ----- EXAM 2
5	July 6-9	Theory of Island Biogeography and Conservation Biology ----- EXAM 3

**Course Evaluation Methods**

This course will utilize the following instruments to determine student grades and proficiency of the learning outcomes for the course:

**Participation (25 points)** – The student will read ahead of the class to participate in class discussions.

**Oral presentation of a topic (25 points)** – Each student will orally communicate his/her **designated topic** and coordinate its discussion in class. **The topic will be designated by the instructor.** The student will take notes of this discussion to be included in the final version of his/her written report on the same topic.

**Written report of a topic (50 points)** – Each student will research, read, analyze and prepare a written report **on the topic designated by the instructor.** The final version of this report should include the in-class discussion. The final written report is due at the beginning of the first class of the following week (i.e., the student will have the weekend after her/his presentation to finish the report). At least one peer-reviewed article is required to be included in the report (in addition of the textbooks, if used).

**Homework assignments (100 points)** – A homework assignment will be given to the students each week and it will be due at the beginning of the first class of the following week. The students can work in groups on the assignments, but each student should turn-in her/his own work (i.e., these are individual assignments).

**Exams (300 points)** – The student will be given three in-class examinations. Each exam is worth 100 points, and will consist of a combination of multiple choice, short answer, and essay items. Attendance is required for all exams.

**Grading Matrix**

Instrument	Total points	Percentage value
Participation	25	5 %
Oral presentation of a topic	25	5 %
Written report of a topic	50	10 %
Homework assignments	100	20 %
Exam 1	100	20 %
Exam 2	100	20 %
Exam 3	100	20 %
<b>Total</b>	<b>500</b>	<b>100 %</b>

**Grade Determination**

A = 90% or better  
 B = 80 – 89 %  
 C = 70 – 79 %  
 D = 60 – 69 %  
 F = less than 60%

**Course Policies and Procedures****Late work and make-up exams**

No late assignments will be accepted without obtaining prior authorization or proving validity of absence. In such a case, the assignment should be turned in at the beginning of the following class and **10% of the points will be deducted.** Exams will only be administered on the dates provided in the syllabus. You will NOT be allowed to leave the classroom

and return during the exam (i.e. go to the restroom before the exam!). If you will be observing a religious holy day that is coincidental with an exam, make your instructor aware before its observance. Make-up exams will be administered during the class period **preceding** the regular exam date.

### **Cell phone policy**

Do **NOT** use your cell phone in class; this includes calling, texting, internet surfing, and gaming. If your cell phone must be on during class, apply its "silent" settings. If you keep your phone on during class time, do not keep it on top of the table you are sitting at, please keep it in your pocket, purse, or bag. If your phone rings during an exam, even if the silent setting has been applied, you must turn in your exam immediately.

### **Laptop policy**

You may use your laptop in class to take notes, but **only to take notes**. If it becomes apparent that laptops are being used by the student for activities other than lecture note taking, **all laptop use will be prohibited during class time**. Laptops are not to be used during exams. If you bring a laptop to an exam, it must remain in a bag and under the table.

### **Cheating and plagiarism**

Cheating will **NOT** be tolerated in this course. If you are found cheating on an assignment or exam, you will not receive credit for the assignment/exam, and student services will be notified. Cheating includes using unauthorized material or devices on an exam, the work of another individual without proper citations, using larger portions of another's work, even with proper citations, and copying the work of a classmate. There are no exceptions to this policy.

## **University Policies and Procedures**

### **Students with Disabilities (ADA Compliance)**

The University of North Texas Dallas faculty is committed to complying with the Americans with Disabilities Act (ADA). Any student requesting academic accommodations based on a disability is required to register with Disability Services each semester. A letter of verification for approved accommodations can be obtained from this office. Please be sure the letter is delivered to me as early in the semester as possible. Disability Services is located in the **Student Life Office in DAL2, Suite 200** and is open **8:30 a.m. – 5:00 pm, Monday through Friday**. The phone number is (972) 338-1775.

### **Student Evaluation of Teaching Effectiveness Policy**

The Student Evaluation of Teaching Effectiveness (SETE) is a requirement for all classes at UNT. This short survey will be made available to you at the end of the semester, providing you a chance to comment on how this class is taught. I am very interested in the feedback I get from students, as I work to continually improve my teaching. I consider the SETE to be an important part of your participation in this class.

### **Assignment Policy**

Assignments are intended to reinforce material covered in lecture, and prepare you for the exams. Collaborative efforts on completing the assignments are encouraged so long as all member of the collaboration contribute equally. As with all other graded assessments, cheating will not be tolerated. While collaborations are encouraged, each student must submit their own work, which cannot be identical to the work submitted by the other members of the collaboration. Assignments should be turned in on time. Late assignments will be graded, but with a penalty of 10%.

### **Exam Policy**

Exams should be taken as scheduled. No makeup examinations will be allowed except for documented emergencies (See Student Handbook). Any student caught cheating will automatically receive a 0 on the exam, and the instructor may pursue further disciplinary action. After the first exam is turned in, no more exams will be distributed to students that arrive late to the exam period.

### **Academic Integrity**

Academic integrity is a hallmark of higher education. You are expected to abide by the University's code of Academic Integrity Policy. Any person suspected of academic dishonesty (i.e., cheating or plagiarism) will be handled in accordance with the University's policies and procedures. Refer to the Student Code of Academic Integrity at [http://www.unt.edu/unt-dallas/policies/Chapter%2007%20Student%20Affairs,%20Education,%20and%20Funding/7.002%20Code%20of%20Academic\\_Integrity.pdf](http://www.unt.edu/unt-dallas/policies/Chapter%2007%20Student%20Affairs,%20Education,%20and%20Funding/7.002%20Code%20of%20Academic_Integrity.pdf) for complete provisions of this code.

In addition, all academic work submitted for this class, including exams, papers, and written assignments should include the following statement:

***On my honor, I have not given, nor received, nor witnessed any unauthorized assistance that violates the UNTD Academic Integrity Policy.***

**Bad Weather Policy**

On those days that present severe weather and driving conditions, a decision may be made to close the campus. In case of inclement weather, call UNT Dallas Campus main voicemail number (972) 780-3600 or search postings on the campus website [www.unt.edu/dallas](http://www.unt.edu/dallas). Students are encouraged to update their Eagle Alert contact information, so they will receive this information automatically.

**Attendance and Participation Policy**

The University attendance policy is in effect for this course. Class attendance and participation is expected because the class is designed as a shared learning experience and because essential information not in the textbook will be discussed in class. The dynamic and intensive nature of this course makes it impossible for students to make-up or to receive credit for missed classes. Attendance and participation in all class meetings is essential to the integration of course material and your ability to demonstrate proficiency. Students are responsible to notify the instructor if they are missing class and for what reason. Students are also responsible to make up any work covered in class. It is recommended that each student coordinate with a student colleague to obtain a copy of the class notes, if they are absent.

**Diversity/Tolerance Policy**

Students are encouraged to contribute their perspectives and insights to class discussions. However, offensive and inappropriate language (swearing) and remarks offensive to others of particular nationalities, ethnic groups, sexual preferences, religious groups, genders, or other ascribed statuses will not be tolerated. Disruptions that violate the Code of Student Conduct will be referred to the Office of Student Life as the instructor deems appropriate.

**Use of Electronic Gadgets in the Classroom**

You are allowed to take notes using laptops/iPads/other electronic devices. You are allowed to record the lectures. The instructor reserves the right to ask you to discontinue use of an electronic device if it becomes disruptive to others in the classroom.

**Food/Drink Policy**

Food or drinks are allowed in the classroom.