The University of Texas at El Paso  
College of Science  
Department of Biological Sciences  

Course #: BIOL-4395, CRN 26411  
Course title: Quantitative Methods in Ecology  
Credit hours: 3.0  
Prerequisite course: BIOL 3316-3116 (Ecology); or permission of instructor.  

Instructor: Dr. Vanessa Lougheed  
E-mail: vlougheed@utep.edu  
Office: B316  
Phone: 747-6887  

Lectures: 1:20 h per week - MONDAYS in Worrel Hall 205.  
Computer Labs: 1:20 h per week - WEDNESDAYS in LART 405A.  

Lecture notes, assignments, data sets and other class materials will be posted on Blackboard  

Other readings will be assigned from the literature  

Required software: R & R-Studio; Download from http://www.rstudio.com/  

Other suggested textbooks in the field (NOT required):  

Grading Scheme:  
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<tbody>
<tr>
<td>Assignments (10)</td>
<td>40%</td>
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<tr>
<td>Quizzes (3)</td>
<td>30%</td>
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<tr>
<td>Final</td>
<td>30%</td>
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Course objective:  
This course includes a combination of lectures, assignments, and tests on biostatistics and other quantitative methods in ecology. The primary objective of this class is to learn how to explore and analyze ecological data using both descriptive and inferential statistics. This course will provide you with a set of analytical tools and techniques to enable you to undertake a substantial proportion of your own experimental design and data analysis, as well as understand current ecological literature.
The tools include both tools in statistical analysis and modern graphical approaches to data analysis and display.

**Assignments** (10 assignments worth 4% each). Assignments will test your ability to analyze and interpret biological datasets. For statistics, you will be expected to analyze the data as instructed using the program "R-studio". Assignments are due before the start of class on the due date. Late assignments will not be accepted. *Most assignments should be completed and graded in class. If necessary, please send any assignments electronically as a SINGLE MS WORD document to vlougheed@utep.edu.*

**Quizzes** (3 quizzes worth 10% each)  
3 quizzes will occur during the lab period. Questions will be extracted from Whitlock and Schluter (2008), with occasional added material, and will cover all material taught up to the Quiz date.

**Final Exam** (30%). The final exam will be a take-home exam and will cover all lecture material and lab assignments.