Textbook and/or Resource Material
No text required. All materials will be provided in class.
Recommended reading: All reading materials are uploaded on Blackboard

Course Description and Prerequisites
Students completing this course should become familiar with the application of ecological principles to the study of plants, microbes, and insects, as well as major areas of inquiry in this field. Highlighted topics will include plant responses to biotic and abiotic stressors, plant-microbe-insect interactions, chemical and sensory ecology, and disease ecology. The course will also emphasize evolution and adaptation in the context of plant mediated interactions with other organisms. Scientific literature-based examples will be incorporated into lectures, and will be the basis for the discussion sessions.

Welcome Statement
Since the class has an enrollment of more than 24 students, the course will be primarily taught using PowerPoint/keynote-based slides. However, the slides will also have embedded videos (primarily from YouTube/ Ted Talks/PBS) and short interviews from scientists. We will also bring in a couple of guest speakers. The videos may also be part of the assessment. You will also see that the reading for each class will also have video files. Here is an example of the type of videos we will discuss in the class. https://www.youtube.com/watch?v=B9lrlpOLJ14

Teaching Philosophy
One major point you all have to remember is that this is a graduate class with over 24 students, and it is easy to get lost in the crowd. I will try to make the class as engaging as I can, and I am always available to help you, but you do have to put in the work. Study in groups, show up for class, stop by during office hours. It is not a hard class, but not that simple either. I will provide enough breaks during the 2.5 hours class, and so no cellphones or computers (unless specifically asked for) are not allowed in the class. If you are later for more than 5 minutes, unless communicated in advance, you will not receive attendance points.
Learning Objectives/Outcomes for the Course

**Scientific:** A broader understanding of species interactions, and the mechanisms underlying these interactions. You also get an opportunity to interview top scientists in the field through Skype interviews.

**Personal:** One of the learning objectives is to learn how to read, analyze and critique scientific literature. You will also learn how scientists develop research methods to test hypotheses, and will eventually be able to judge whether the methods and analyses were appropriate for the questions they asked. Finally, you will develop the ability to confidently discuss scientific literature with your peers, and be able to place the results of a paper within the context of the broader scope of the discipline.

Learning Objectives for Core Curriculum Requirements
This class will match the outcomes set by the Texas Higher Education Coordinating Board (THECB) including Critical Thinking Skills, Communication Skills, Empirical and Quantitative Skills, and Teamwork through the student lectures, and assignments.

<table>
<thead>
<tr>
<th>Learning Objective</th>
<th>Assignments that Addresses</th>
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<tbody>
<tr>
<td>Critical Thinking</td>
<td>Activities will include developing hypotheses, interpreting data and analyzing existing research by using the scientific method</td>
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<tr>
<td>Communication Skills</td>
<td>Students will have several written assignments including essays and lab reports, as well as oral presentations on experimental findings</td>
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<tr>
<td>Empirical and Quantitative Skills</td>
<td>Students will collect original data for several experiments and analyze these data using basic statistical tests and graphs</td>
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<tr>
<td>Teamwork</td>
<td>Activities will include working collaboratively to collect and interpret data and presenting material to other students in addition to writing a manuscript</td>
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Grading Policies
Attendance and class participation (individual): 10%
In class lecture (group): 10%
Faculty interview assignment (group): 10%
100 questions assignment in insect-plant-microbe interactions (group): 5%
Biology department seminar series participation: 5%
Research project (group): 60%
Grading of research project:

1. Submission and presentation of hypotheses, study system and methodology: 20%
2. Data collection and analyses: 20%
3. In class presentation of experiment, statistics and results: 20%
4. Draft write up of the manuscript: 20%
5. Final submission: 20%
Tentative schedule:

Week 1: August 28
Insects, plants and microbes, and their importance in ecosystem processes

Week 2
Species interactions I- Mutualisms
Student group lecture topics due

Week 3
Species interactions I- Mutualisms
Student group lecture 1
Group manuscript topic due

Week 4
Guest Panel Discussion (UTRGV faculty in species interactions)
Major questions in the field, prospects
Meet and Greet a Scientist assignment – Questions due for approval
Student group lecture 2

Week 5
Species interactions II- Plant herbivore interactions
Student group lecture 3
100 questions in species interactions assignment due

Week 6
Species interactions II- Plant herbivore interactions
Student group lecture 4,5

Week 7
Species interactions III- Plant-microbe interactions
Meet and Greet a Scientist assignment report due
Experimental design seminar by each group for the final project

Week 8
Ecophysiology, Chemical and Sensory Ecology of Species Interactions I
Student group lecture 6
Manuscript outlines due

Week 9
Ecophysiology, Chemical and Sensory Ecology of Species Interactions II

Week 10
Evolutionary and Behavioral Ecology of Species Interactions I
Student group lecture 7,8

Week 11
Evolutionary and Behavioral Ecology of Species Interactions II
Week 12
Species interactions III - Predator-Prey Interactions

Week 13
Species interactions IV - Host-Pathogen interactions and disease transmission I

Week 14
Species interactions IV - Host-Pathogen interactions and disease transmission II

Week 15
Final group manuscript due

Faculty interview list:
1. Dr. Kerry Mauck (UC Riverside; https://entomology.ucr.edu/people/kerry-mauck)
2. Dr. Joe Louis (University of Nebraska, Lincoln; https://plant-insect-interactions-lab.unl.edu/department-entomology-plant-insect-interactions-lab)
3. Dr. Nina Stanczyk (Swiss Federal institute of Technology, ETH Zurich; https://usys.ethz.ch/en/people/profile.MjIxMjI2.TGlzdC82MzcsMzlwMTk3Mjly.html)
4. Dr. Foteini Paschalidou (Institute National de la Recherche Agronomique (INRA, France; https://sites.google.com/view/foteini-pashalidou/home?authuser=0)
5. Dr. Martin Turcotte (University of Pittsburgh; http://www.martinturcotte.net/)
6. Dr. Clare Casteel (Cornell University/ UC Davis; https://casteel.faculty.ucdavis.edu/)
7. Dr. Anjel Helms (Texas A and M; https://entomology.tamu.edu/people/helms-anjel/)
8. Dr. Rafael Bello-Bedoy (Profesor Investigador at Facultad de Ciencias Universidad Autónoma de Baja California; https://www.researchgate.net/profile/Rafael_Bello-Bedoy)

Some important dates for Fall 2019 include:
August 26        First day of classes
August 29        Last day to add a course or register for Fall 2019
September 2      Labor Day Holiday – NO classes
November 13      Last day to drop a course; will count toward the 6-drop rule
November 28 - 29 Thanksgiving Holiday – NO classes
December 5       Study Day – NO classes
December 6 - 12  Final Exams
December 13 - 14 Commencement Exercises

UTRGV Policy Statements

STUDENTS WITH DISABILITIES:
Students with a documented disability (physical, psychological, learning, or other disability which affects academic performance) who would like to receive academic accommodations should contact Student Accessibility Services (SAS) as soon as possible to schedule an appointment to initiate services. Accommodations can be arranged through SAS at any time, but are not retroactive. Students who experience a broken bone, severe injury, or undergo surgery during the semester are eligible for temporary services.

Pregnancy, Pregnancy-related, and Parenting Accommodations
Title IX of the Education Amendments of 1972 prohibits sex discrimination, which includes discrimination based on pregnancy, marital status, or parental status. Students seeking accommodations related to pregnancy, pregnancy-related condition, or parenting (reasonably
immediate postpartum period) are encouraged to contact Student Accessibility Services for additional information and to request accommodations.

**Student Accessibility Services:**
**Brownsville Campus:** Student Accessibility Services is located in 1.107 in the Music and Learning Center building (BMSLC) and can be contacted by phone at (956) 882-7374 or via email at ability@utrgv.edu.

**Edinburg Campus:** Student Accessibility Services is located in 108 University Center (EUCTR) and can be contacted by phone at (956) 665-7005 or via email at ability@utrgv.edu.

**MANDATORY COURSE EVALUATION PERIOD:**

Students are required to complete an ONLINE evaluation of this course, accessed through your UTRGV account (http://my.utrgv.edu); you will be contacted through email with further instructions. Students who complete their evaluations will have priority access to their grades. Online evaluations will be available on or about:

- **Module 1** October 2nd – 8th
- **Module 2** November 27th – December 3rd
- **Full Fall Semester** November 14th – December 4th

**ATTENDANCE:**
Students are expected to attend all scheduled classes and may be dropped from the course for excessive absences. UTRGV’s attendance policy excuses students from attending class if they are participating in officially sponsored university activities, such as athletics; for observance of religious holy days; or for military service. Students should contact the instructor in advance of the excused absence and arrange to make up missed work or examinations.

**SCHOLASTIC DISHONESTY:**
As members of a community dedicated to Honesty, Integrity and Respect, students are reminded that those who engage in scholastic dishonesty are subject to disciplinary penalties, including the possibility of failure in the course and expulsion from the University. Scholastic dishonesty includes but is not limited to: cheating, plagiarism (including self-plagiarism), and collusion; submission for credit of any work or materials that are attributable in whole or in part to another person; taking an examination for another person; any act designed to give unfair advantage to a student; or the attempt to commit such acts. Since scholastic dishonesty harms the individual, all students and the integrity of the University, policies on scholastic dishonesty will be strictly enforced (Board of Regents Rules and Regulations and UTRGV Academic Integrity Guidelines). All scholastic dishonesty incidents will be reported to Student Rights and Responsibilities.

**SEXUAL MISCONDUCT and MANDATORY REPORTING:**
In accordance with UT System regulations, your instructor is a “Responsible Employee” for reporting purposes under Title IX regulations and so must report to the Office of Institutional Equity & Diversity (oie@utrgv.edu) any instance, occurring during a student’s time in college, of sexual misconduct, which includes sexual assault, stalking, dating violence, domestic violence, and sexual harassment, about which she/he becomes aware during this course through writing, discussion, or personal disclosure. More information can be found
at [www.utrgv.edu/equity](http://www.utrgv.edu/equity), including confidential resources available on campus. The faculty and staff of UTRGV actively strive to provide a learning, working, and living environment that promotes personal integrity, civility, and mutual respect that is free from sexual misconduct, discrimination, and all forms of violence. If students, faculty, or staff would like confidential assistance, or have questions, they can contact OVAVP (Office for Victim Advocacy & Violence Prevention) at 665-8287, 882-8282, or [OVAVP@utrgv.edu](mailto:OVAVP@utrgv.edu).

**COURSE DROPS:**
According to UTRGV policy, students may drop any class without penalty earning a grade of DR until the official drop date. Following that date, students must be assigned a letter grade and can no longer drop the class. Students considering dropping the class should be aware of the “3-peat rule” and the “6-drop” rule so they can recognize how dropped classes may affect their academic success. The 6-drop rule refers to Texas law that dictates that undergraduate students may not drop more than six courses during their undergraduate career. Courses dropped at other Texas public higher education institutions will count toward the six-course drop limit. The 3-peat rule refers to additional fees charged to students who take the same class for the third time.

**STUDENT SERVICES:**
Students who demonstrate financial need have a variety of options when it comes to paying for college costs, such as scholarships, grants, loans and work-study. Students should visit the Students Services Center (U Central) for additional information. U Central is located in BMAIN 1.100 (Brownsville) or ESSBL 1.145 (Edinburg) or can be reached by email ([ucentral@utrgv.edu](mailto:ucentral@utrgv.edu)) or telephone: (888) 882-4026. In addition to financial aid, U Central can assist students with registration and admissions.

Students seeking academic help in their studies can use university resources in addition to an instructor’s office hours. University Resources include the Advising Center, Career Center, Counseling Center, Learning Center, and Writing Center. The centers provide services such as tutoring, writing help, critical thinking, study skills, degree planning, and student employment. Locations are:

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<tr>
<th>Center Name</th>
<th>Brownsville Campus</th>
<th>Edinburg Campus</th>
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<tbody>
<tr>
<td>Advising Center</td>
<td>BMAIN 1.400 (956) 665-7120</td>
<td>ESWKH 101 (956) 665-7120</td>
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<tr>
<td><a href="mailto:AcademicAdvising@utrgv.edu">AcademicAdvising@utrgv.edu</a></td>
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<tr>
<td>Career Center</td>
<td>BCRTZ 129 (956) 882-5627</td>
<td>ESSBL 2.101 (956) 665-2243</td>
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<td><a href="mailto:CareerCenter@utrgv.edu">CareerCenter@utrgv.edu</a></td>
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<tr>
<td>Counseling Center</td>
<td>EUCTR 109 (956) 665-2574</td>
<td>BSTUN 2.10 (956) 882-3897</td>
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<td><a href="mailto:Counseling@utrgv.edu">Counseling@utrgv.edu</a></td>
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<tr>
<td>Learning Center</td>
<td>BMSLC 2.118 (956) 882-8208</td>
<td>ELCTR 100 (956) 665-2585</td>
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<tr>
<td><a href="mailto:LearningCenter@utrgv.edu">LearningCenter@utrgv.edu</a></td>
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<tr>
<td>Writing Center</td>
<td>BUBLB 3.206 (956) 882-7065</td>
<td>ESTAC 3.119 (956) 665-2538</td>
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<td><a href="mailto:WC@utrgv.edu">WC@utrgv.edu</a></td>
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