EXOTIC SPECIES AND BIOSECURITY ISSUES
ALS 4161/6166
3 CREDITS
FALL 2022

INSTRUCTOR INFORMATION

Instructor
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GENERAL INFORMATION

Course Description
This course covers a study of U.S. policies and programs affecting agricultural biosecurity. Emphasis is on current agricultural extension and regulatory programs, and the policies and procedures involved in detecting, managing, and reporting non-indigenous species. Students will develop the analytical capabilities to assess the consequences of agricultural biosecurity threats. The course will explore content using narrated lectures and assigned readings.

Learning Goals and Objectives
After completing this course, students will be able to:
- describe the importance of invasive species to U.S. agriculture and natural areas
- evaluate trade issues and their relevance to agricultural biosecurity
- explain the principles and basic practices of pest exclusion, eradication, and management tactics for invasive species issues
- describe the research, extension, and regulatory components of invasive species issues
- appraise and appreciate early detection, and correct identification of new and emerging pest problems
- evaluate news and developments reported in the popular and scientific media on issues affecting the subject matter of this course

- communicate research on exotic species and biosecurity issues using written skills

Prerequisite

Integrated Principles of Biology 1 and Laboratory (BSC 2010 and 2010L), and
Integrated Principles of Biology 2 and Laboratory (BSC 2011 and 2011L) or equivalent.

Course Website

The course content, including narrated lectures, assigned readings, examinations, quizzes, discussions, and assignments will be available through the course website in Canvas at https://elearning.ufl.edu/. Each week, students are required to view the narrated lectures and associated readings, participate in the group discussions, and take the assignments, quizzes, and examinations prior to the assigned due dates to complete the course requirements. Weekly modules will be available by 8:00 am on Monday of the module week.

Course Communications

In addition to the assigned group discussion assignments, students are encouraged to post general questions on topics taught in the class under the "General Questions" thread. The instructor and/or the Teaching Assistants (TAs) will respond to the questions. Other students are also encouraged to respond to the questions. Private questions relating to the course should be sent to the instructor via e-mail. Students will be notified by Canvas e-mail if the instructor or TAs will be unavailable for office hours.

COURSE MATERIALS

Textbooks/Readings

The following textbook is **required** for this course:
- Mick N. Clout and Peter A. Williams. 2013. Invasive Species Management. A handbook of Principles and Techniques. Oxford University Press. 308 pp.
  This textbook is available free of charge as an ebook through the UF libraries with your Gatorlink login

COURSE SCHEDULE

Week/Dates	Topic	Reading	Tasks/Assessments
1/August 24 - 28	Module 1 – Biosecurity and quarantine for preventing invasive species	• Clout, Chapter 1	• Discussion 1 • Quiz 1
2/August 29 – September 4	Module 2 – Risk assessment of invasive species	• Clout, Chapter 2	• Discussion 2 • Quiz 2
3/September 6 - 11	Module 3 – Detection and early warning of invasive species	• Clout, Chapter 3	• Discussion 3 • Quiz 3
4/ September 12 - 18	Module 4 – Eradication of invasive species: Progress and emerging issues in the	• Clout, Chapter 4	• Discussion 4 • Quiz 4

	21st century		• Pest risk assessment report topic due (graduate students only)
5/ September 19 - 25	Module 5 – Principles of containment and control of invasive species	• Clout, Chapter 5	• Discussion 5 • Quiz 5 • Exam 1
6/ September 26 – October 2	Module 6 – Biological control of invasive species	• Clout, Chapter 6	• Discussion 6 • Quiz 6
7/ October 3 – 9	Module 7 – Public participation in invasive species management	• Clout, Chapter 7	• Discussion 7 • Quiz 7
8/October 11 – 16	Module 8 – International legal instruments and frameworks for invasive species	• Clout, Chapter 8	• Discussion 8 • Quiz 8
9/ October 17 – 23	Module 9 – Management of invasive plants	• Clout, Chapters 9 and 10	• Discussion 9 • Quiz 9 • Pest risk assessment report due (graduate students only)
10/ October 24 – 30	Module 10 – Management of invasive invertebrates	• Clout, Chapter 11	• Discussion 10 • Quiz 10 • Exam 2
11/ October 31 - November 6	Module 11 – Management of terrestrial vertebrate pests	• Clout, Chapter 12	• Discussion 11 • Quiz 11
12/ November 7 – 13	Module 12 – Management of invasive fish	• Clout, Chapter 13	• Discussion 12 • Quiz 12
13/November 14 - 20	Module 13 – Marine biosecurity: Management options and response tools	• Clout, Chapter 14	• Discussion 13 • Quiz 13
14/November 23- 27	***Thanksgiving week***		
15/November 28 – December 4	Module 14 – Management of interacting invasives: Ecosystem approaches	• Clout, Chapter 15	• Discussion 14 • Quiz 14 • Exam 3

Disclaimer: This syllabus represents current course plans and objectives. As we go through the semester, those plans may need to change to enhance the class learning opportunity. Such changes, communicated clearly, are not unusual and should be expected.

COURSE POLICIES

Attendance Policy

This is an online class. Students are, therefore, required to view the weekly narrated lectures and the associated readings each week. You will **not** be allowed to take the exam after the exam date **unless prior arrangements have been made.** Requirements for class attendance and make-up exams, assignments, and other work are consistent with university policies that can be found at: https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx

Course Requirements

There are 3 examinations, 14 graded group discussions, 14 quizzes, and a pest risk assessment report (required for graduate students only) to complete the course requirements.

Examinations

There are three, non-cumulative exams (50 points each) throughout the course. Each exam will be made available and accessible in Canvas from 8:00 am to 11:59 pm EST on Friday of the exam week. You must have a Gatorlink account to access the exams. The exams will be proctored using HonorLock. The computer being used must have a camera and no outside materials or notes are allowed during the exam. You may not cut and paste information or consult current or former students for answers. Once you begin the exam, you will have 120 minutes to complete it in a single session, so do not open the exam until you are ready to complete it. The content that will be covered for the exams are as follows:

- o Exam 1: Modules 1 through 5
- o Exam 2: Modules 6 through 10
- o Exam 3: Modules 11 through 14

Quizzes

There are 14 quizzes (5 points each) throughout the course. The quizzes will consist of 5 questions. The quizzes will be made available and accessible in Canvas from 8:00 am to 11:59 pm EST on Friday of the quiz week. The quizzes are not proctored. Once you begin the quiz, you will have 7 minutes to complete it in a single session, so do not open the quiz until you are ready to complete it.

Discussions

There are 14 group discussion assignments (10 points each) throughout the course. All students are required to join a group for each of the weekly discussions. Students must cite the sources for the facts they use to support their reasoning. There must be at least one citation from peer-reviewed literature outside class modules or notes. Students may, in addition, cite educated and reliable sources such as opinions, technical reports, websites, and press releases to support their reasoning. The grade for the group will be the same grade awarded to each member of the group. Students are also required to evaluate the contribution of each member of the group to the group discussion. The evaluation will be confidential and will be submitted to the instructor. Each discussion assignment will be open for one week. Overall, each of the discussion assignment will be evaluated as follows:

1. Group discussion post (5 points) – each group is to submit their post. The grade for each whole group will be the same grade for each member of the group.
2. Evaluation of individual to group discussion (5 points) – each member of the group must evaluate every other member in then group. Evaluations will be done using a rubric that will be provided in Canvas. Failure to submit the evaluation will result in the student obtaining a score of 0.

Pest Risk Assessment Report (required for graduate students only)

For the pest risk assessment report (100 points), graduate students will prepare an analysis of a pest of concern to Florida or the United States for development of a pest risk assessment. It could be about a pest or pathogen of medical or agricultural importance. The report should comprise the following:
1. Categorization of the pest or pathogen of concern
2. Assessment of the probability of introduction and spread
3. Assessment of potential economic consequences (including environmental impacts) of its introduction and establishment

The pest risk assessment report should not be more than 10 pages in length (including the main text, references, tables and/or figures). It should be double-spaced, 12 point, Times New Roman font with 1-inch margins. You are to submit your topic to the instructor for approval before the topic submission due date. The references should be at least 5 from primary literature and must be according to the APA 7th referencing style. Instructions on how to structure the report will be posted in Canvas. The reports are due by 11:59 pm of the due date. Late submissions will be marked down by 5 points per day. Overall, the pest risk assessment report evaluations will be as follows:
1. Evaluation of the pest risk assessment draft by instructor (10 points) – you are to submit the topic of your pest risk assessment report, including an abstract, and a list of 3 references. Include a 3 – 5 sentence content summary of 3 references, for approval by the instructor before the due date. Submissions should be made in Canvas and will be evaluated using a rubric
2. Evaluation of pest risk assessment report by the instructor (90 points) – you are to submit your pest risk assessment report before the due date for evaluation by the instructor. The pest risk assessment report will be evaluated by the instructor using a rubric

Extra Credit
There are no extra credits offered for the course.

Additional help:
Since this course is offered 100% online, appointments for a phone call or conference call can be made with the instructor or the TAs through Canvas. You can also email the instructor or the TAs with any questions you may have. Please read through the following Honor Code that students must abide by for this course and attendance at the university, which can be found here:
https://catalog.ufl.edu/ugrad/1617/advising/info/student-honor-code.aspx

GRADING POLICIES

The course grade is based on performance on the exams, quizzes, participation in discussion activities, and the pest management report (for graduate students only). The final grade points will be converted to percentages. The final grade will be assigned as follows:

Course Requirements		Undergraduate		Graduate	
		Point Value	Total Grade Points	Point Value	Total Grade Points
Quizzes		5 each	70	5 each	70
Exams		50 each	150	50 each	150
Discussions	Discussion post	5 each	70	5 each	70
	Evaluation of individual contribution to group discussion	5 each	70	5 each	70
Pest Management report (graduate students only)	Evaluation of the pest risk assessment topic by instructor	n/a	n/a	10	10
	Evaluation of pest risk assessment report by the instructor	n/a	n/a	90	90
Total			**360**		**460**

Grading Scale

Grade	Percentages
A	93 – 100
A-	90 – 92.9
B+	87 – 89.9
B	83 – 86.9
B-	80 - 82.9
C+	77 - 79.9
C	73 - 76.9
C-	70 - 72.9
D+	67 - 69.9
D	63 - 66.9
D-	60 - 62.9
E	<59.9 and below

Online Course Evaluation Process

Student assessment of instruction is an important part of efforts to improve teaching and learning. At the end of the semester, students are expected to provide feedback on the quality of instruction in this course using a standard set of university and college criteria. These evaluations are conducted online at https://evaluations.ufl.edu. Evaluations are typically open for students to complete during the last two or three weeks of the semester. Students will be notified of the specific times when they are open. Summary results of these assessments are available to students at https://evaluations.ufl.edu/results.

UNIVERSITY OF FLORIDA POLICIES AND ASSISTANCE

Grades and Grade Points

For information on current UF policies for assigning grade points, see
https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx

Academic Honesty

The university requires all members of its community to be honest in all endeavors. Cheating, plagiarism, and other acts diminish the process of learning. When students enroll at UF, they commit themselves to honesty and integrity. Your instructor fully expects you to adhere to the academic honesty guidelines you signed when you were admitted to UF.

Plagiarism is the use of ideas or writings produced by someone else. You should not use the writings of another person, including material from the internet (WWW), without putting the ideas in your own words, or placing the copied material in quotes and attributing authorship. In the scientific literature, quotations are rarely used. You should use your own words for answering questions on exams, and in your class project.

As a result of completing the registration form at the University of Florida, every student has signed the following statement:

"I understand the University of Florida expects its students to be honest in all their academic work. I agree to adhere to this commitment to academic honesty and understand that my failure to comply with this commitment may result in disciplinary action up to and including expulsion from the University. Furthermore, on work submitted for credit by UF students, the following pledge is either required or implied: "*On my honor, I have neither given nor received unauthorized aid in doing this assignment."*

It is to be assumed that all work will be completed independently unless the assignment is defined as a group project in writing by the instructor. This policy will always be vigorously upheld in this course.

Furthermore, as part of your obligation to uphold the Honor Code, you should report any condition that facilitates academic misconduct to the appropriate personnel. It is your individual responsibility to know and comply with all university policies and

procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For more information regarding the Student Honor Code, please see: http://www.dso.ufl.edu/sccr/process/student-conduct-honor-code

Services for Students with Disabilities

The Disability Resource Center coordinates the needed accommodations of students with disabilities. This includes registering disabilities, recommending academic accommodations within the classroom, accessing special adaptive computer equipment, providing interpretation services and mediating faculty-student disability related issues. Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the instructor when requesting accommodation 0001 Reid Hall, 352-392-8565, www.dso.ufl.edu/drc/

Campus Helping Resources

Students experiencing crises or personal problems that interfere with their general wellbeing are encouraged to utilize the university's counseling resources. The Counseling Center provides confidential counseling services at no cost for currently enrolled students. Resources are available on campus for students having personal or lacking clear career and academic goals, which interfere with their academic performance.

- The University Counseling and Wellness Center, 3190 Radio Road, 352-392-1575 www.counseling.ufl.edu
  - Counseling Services
  - Groups and Workshops
  - Outreach and Consultation
  - Self-Help Library
  - Wellness Coaching
- U Matter We Care, www.umatter.ufl.edu/
- Career Resource Center, First Floor JWRU, 392-1601, https://career.ufl.edu/