

Exotic Species and Biosecurity Issues, ALS 6166

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Office Hours: Friday 8:30am-9:30am and 12:45pm-1:45pm

Students will be notified by Canvas e-mail if instructor or TAs will be unavailable for office hours.

Course Website: University of Florida, Canvas e-learning system (<https://lss.at.ufl.edu/>). ALS 4161, 6166 will only be only be offered online.

Course Prerequisites:

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.

Textbook and other resources:

Optional Textbooks: Exotic Pests and Diseases: Biology and Economics for Biosecurity, D.A. Sumner (ed.), 2003, ISBN#0-8138-1966-0, Iowa State Press

Potential Invasive Pests of Agricultural Crops, J.E. Peña (ed.), 2013, ISBN#13-978-1-84593-829-1, CABI

Course Objectives:

Catalog Statement: “Study of U.S. policies and programs affecting agricultural biosecurity. Attention is devoted to current agricultural extension and regulatory programs. Emphasis is on the policies and procedures involved in detecting and reporting non-indigenous species. Students will develop the analytical capabilities to assess the consequences of agricultural biosecurity threats.”

From the lecture and course assignments, students will gain an understanding of the following agricultural biosecurity concepts:

1. An awareness of the importance of invasive species to U.S. agricultural and natural areas.
2. An awareness of trade issues and their relevance to agricultural biosecurity.
3. An understanding of the principles and basic practices of pest exclusion, eradication, and management tactics for invasive species issues.
4. An ability to assimilate information on invasive species, and develop inferences from case study examples.
5. A perspective on the research, extension, and regulatory components of invasive species issues.
6. An appreciation of early detection and correct identification of new and emerging pest problems.
7. An awareness of news and developments reported in the popular and scientific media on issues affecting the subject matter of this course.
8. An awareness of the importance of insect vectors to animal and human health.
9. An awareness of the importance of exotic animal disease threats to agriculture.

Grading:

	Point Value	Total
Assignments	50 each	200
Term paper draft	40	40
Term paper	175	175
Risk Assessment	175	175
Exams	50 each	100
Introduction post	10	10
Checkpoint Quiz	10 each	50
Total points		750

Final Grading Scale: %

- A 93-100
- A- 90-92
- B+ 87-89
- B 83-86
- B- 80-82
- C+ 77-79
- C 73-76
- C- 70-72
- D+ 67-69
- D 63-66
- D- 60-62
- E 0-59

Incomplete grades: The application process for receiving an incomplete grade is the responsibility of the student. Students may download the CALS incomplete grade form at:

<http://www.cals.ufl.edu/facultystaff/docs/forms/incompleteGradeContract.pdf> (Links to an external site.)

The instructor must sign the application for an incomplete grade, but the student must initiate the paperwork process. The instructor will only approve an incomplete grade application if the following conditions are met:

- The student has completed a major portion of the course with a passing grade (“D” or better).
- The student is unable to complete course requirements because of documented circumstances beyond his or her control.
- The student and instructor have discussed the situation prior to the final exam (except under emergency conditions).
- The instructor will submit a final grade for the student on the date due (indicated below) whether all work is completed.

Note that the paperwork for receiving an incomplete will also include deadlines for remaining assignments due. The instructor will not consider incomplete requests after the last day of classes.

Assignments:

Four assignments will be provided to students within the UF e-learning Canvas website. Some assignments may require students to locate additional references or specific articles within UF libraries (<http://cms.uflib.ufl.edu/>) or on the internet. Any sources needed for assignments will need to be cited.

Modules:

Weekly modules will include narrated lectures, videos, web articles, or journal articles. Some narrated lectures may require use of Adobe Flash (.swf) files. Students will need a reliable internet connection, PowerPoint, and the ability to view Adobe files, including Adobe Flash (.swf file format). Weekly modules will be available by 8:00am on Monday of the lecture week.

Term Paper

All students will complete a scientific, research-based written assignment worth 175 points. The paper topic should be focused on an analysis of a biosecurity system. If you are a pre-medical student, you may want to focus on disease transmission associated with insect vectors, or go through the procedures of how hospitals sterilize equipment. If you are more interested in environmental science, you could write about an invasive species in Florida (how it got here, how it invaded, management tactics, etc). More information on this assignment will be posted in Canvas.

The first draft of your written assignment is worth 40 points. You must submit your original first draft with your final written assignment. The final written assignment will be no more than ten pages in length, double-spaced. Written assignments will be 12 point, Times New Roman font and 1 inch margins. Your written assignment will require that you can assimilate lecture, reading, and other assignment content from the course, and search for your own references in some cases. Written assignments will be graded on the following criteria:

- 1) Appropriate and accurate references utilized
- 2) Requested topic addressed
- 3) Grammatical accuracy
- 4) Logical organization of content
- 5) Use of requested font, margins, and length requirements for the written assignment.

Written assignments are due by 11:59pm on the due date. Written assignments will be checked for plagiarism with Turnitin software (<https://lss.at.ufl.edu/help/Turnitin>). Plagiarism will result in a grade of '0' for the assignment. As a reminder, any sentence taken straight from a source must be quoted. If you take a full sentence straight from a source without quotations (even if you have an in-text citation after) you will receive a zero on the assignment.

Exam Information

Two exams worth 50 point each will be administered during the semester. The exams will be open notes, but exams will be checked for plagiarism. Students are expected to provide exam answers in his/her own words. The exams will be open book/notes and essay-based. A final comprehensive exam will not be administered for this course.

Checkpoint Quiz

Five 10 point checkpoint quizzes will be provided during the semester. Each checkpoint quiz will be multiple choice and time-limited. Due dates for completion of each checkpoint quiz have been posted in the syllabus.

Risk Assessment (ALS 6166 Only)

Graduate students will be required to complete one additional, more detailed writing assignments. The additional assignment is worth 175 points.

- Each graduate student will select a pest of concern for development of a pest risk assessment.
- The pest selected must differ from pests covered in other course assignments.
- The pest risk assessment will be 10-15 pages, double spaced in length.
- Topic pre-approval by course instructor is recommended.

Missed Exams

Exams are open for multiple days. Make-up exams will only be allowed due to clearly documented medical excuses or a death in your immediate family (spouse, sibling, parent, child, or grandparent). You will need to provide the instructor with clear documentation, and contact details to verify the excuse. Extensions will not be given for exams.

E-mail and Communications Requirements

You will be required to obtain a Gatorlink computer account through the university. This service is free to all students. Using this account, you will be able to send and receive e-mail and access the World Wide

Web from home or school. Instructions for getting a Gatorlink account can be found at <http://www.gatorlink.ufl.edu/> (Links to an external site.)[Links to an external site.](#) **You must correspond through this e-mail account. You must also correspond with the instructor through the UF e-learning Canvas system.**

Extra Credit: None

Course Outline

Week	Date	Topic
1	8/21-8/25	Review Syllabus Biosecurity – What is it and Why is it Important? Importance of Invasive Species – Historical and Current Examples Introduction Discussion due 8/27 at 11:59pm
2	8/28-9/1	Importance of Invasive Species and Trade The Importance of Pest and Pathogen Survey Efforts for Florida and US Agriculture Begin Term Paper Checkpoint Quiz 1: Due 9/3 at 11:59pm
3	9/4 (Labor day)-9/8	Mitigating and Managing Invasive Species Problems in Florida
4	9/11-9/15	Arthropods as Disease Vectors Invasive Species, the Caribbean Pathway, and Cuba Assignment 1: Zika Virus Assignment due 9/17 at 11:59pm
5	9/18-9/22	International Trade Concepts and Pest Risk Analysis HHS and Select Agents Checkpoint Quiz 2 due 9/24 at 11:59pm
6	9/25-9/29	Select Agents: Potential Diseases of Human and Animal Concern Assignment 2: The Caribbean Pathway due 10/1 at 11:59pm
7	10/2-10/6	Animal Biosecurity Term Paper Draft due by 10/8 at 11:59pm
8	10/9-10/13	Aquatic Species Risk Concerns Checkpoint Quiz 3 due 10/15 at 11:59pm
9	10/16-10/20	Human and Biosecurity Issues (Continued) Assignment 3: Zoo Biosecurity Assessment (Due Week 10) Exam 1 available (10/16-10/25). Weeks 1-8.
10	10/23-10/27	Mollusks, Plant, and Human Health Concerns Responding to an emergency with the Incident Command System (ICS)

		Assignment 3: Zoo Biosecurity Assessment, due 10/29 at 11:59pm Checkpoint Quiz 4: due 10/29 at 11:59pm
11	10/30-11/3	The Importance of Diagnosing, Sample Submission, and Reporting a Potential Pest or Pathogen of Plant, Animal, or Human Concern Regulatory Case Studies and Recent Examples-Plant Parasitic Nematodes Assignment 3: Response to another students post
12	11/6-11/10	International, National, and Local Regulatory Case Studies Reconsidered Assignment 4: Biosecurity Farm Assessment, due 11/12 at 11:59pm
13	11/13-11/17	Plant Pest Arthropod Case Studies Plant Pathogen Case Studies Checkpoint Quiz 5 due 11/19 at 11:59pm
14	11/20-11/24	Pest and Pathogen Response Examples Happy Thanksgiving!
15	11/27-12/1	Concluding Case Study Examples – Synthesizing Concepts ALS 6166 Only, Risk Assessment, due 12/3 at 11:59pm
16	12/4-12/6	Final Term Paper, due 12/6 at 11:59pm Second Exam (open book) The second exam will be available from 11/30-12/6. Second exam material includes weeks 9-15.

Policy: Academic Honesty, Plagiarism, Software Use, UF Counseling Services, Services for Students with Disabilities Academic Honesty:

In 1995, the UF student body enacted a new honor code and voluntarily committed itself to the highest standards of honesty and integrity. When students enroll at the university, they commit themselves to the standard drafted and enacted by the students.

In adopting this honor code, the students of the University of Florida recognize that academic honesty and integrity are fundamental values of the university community. Students who enroll at the university commit to holding themselves and their peers to the high standard of honor required by the honor code. Any individual who becomes aware of a violation of the honor code is bound by honor to take corrective action. The quality of a University of Florida education is dependent upon community acceptance and enforcement of this honor code.

The Honor Code: We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity.

On all work submitted for credit by students at the university, the following pledge is either required or implied: “On my honor, I have neither given nor received unauthorized aid in doing this assignment.”

The University requires all members of its community to be honest in all endeavors. A fundamental principle is that the whole process of learning and pursuit of knowledge is diminished by cheating, plagiarism and other acts of academic dishonesty. In addition, every dishonest act in the academic environment affects other students adversely, from the skewing of the grading curve to giving unfair advantage for honors or for professional or graduate school admission. Therefore, the university will take severe action against dishonest students. Similarly, measures will be taken against faculty, staff and administrators who practice dishonest or demeaning behavior.

Students should report any condition that facilitates dishonesty to the instructor, department chair, college dean or Student Honor Court.

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

Plagiarism:

Plagiarism is a serious problem in academia today, especially with the ease of obtaining information from the World Wide Web. Plagiarism is defined as representing the words or ideas of another person as one’s own, without attribution to the source. All words and ideas must be attributed to a source unless they are considered common knowledge (i.e., widely known by many people and found in many different sources). There are many kinds of plagiarism, as you will read on the Guide to Plagiarism website referenced below. Plagiarism is unethical, unacceptable in science, and prohibited by the UF Student Honor Code (<http://www.dso.ufl.edu/sccr/honorcodes/honorcode.php> (Links to an external site)). The consequences for plagiarism while at the University of Florida range from receiving a grade of zero for the plagiarized assignment or a failing grade for the course, to, for repeated offenses, expulsion from the university. Plagiarism after graduate training calls into question one’s scientific integrity and can lead to banning of publication in journals and the loss of jobs/careers.

In some countries, it is an acceptable practice to write in a manner that faculty members at the University of Florida consider to be plagiarism. Students studying in our university and with plans to publish their research in the English language need to know what plagiarism is and how to avoid it.

Students who plagiarize will be caught and consequences will be applied. Many faculty in our department check all written assignments using an anti-plagiarism software called Turnitin® . You may wish to customize this section and put in your plans to use Turnitin and your consequences for

plagiarism. For further information and examples of plagiarism, I strongly suggest that you please read the George Smathers' Library Guide to Plagiarism at <http://www.counseling.ufl.edu/cwc/Default.aspx> (Links to an external site.)

Please understand that our purpose in bringing to your attention the matter of plagiarism is to help train you to be ethical scientists, not to impugn your character.

Software Use:

All faculty, staff, and students of the University are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against University policies and rules, disciplinary action will be taken as appropriate.

Campus Helping Resources:

Students experiencing crisis or personal problems that interfere with their general wellbeing are encouraged to utilize the university's counseling resources. Both the Counseling Center and Student Mental Health provide 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 Counseling Center is located at 301 Peabody Hall (next to Criser Hall). Student Mental Health is located on the second floor of the Student Health Services in the Infirmary. 1. University Counseling Center, 301 Peabody Hall, 392-1575; personal and career counseling: <http://www.counseling.ufl.edu/cwc/Default.aspx> 2. Student Mental Health, Rm. 245 Student Health Care Center, 392-1171, personal counseling: <http://shcc.ufl.edu/> • Alcohol and Substance Abuse Program (ASAP) • Center for Sexual Assault/Abuse Recovery & Education (CARE) • Eating Disorders Program • Employee Assistance Program • Suicide Prevention Program 3. Career Resource Center, DR-100 J.W. Reitz Union, 392-1602, career development assistance and counseling. 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. 0001 Reid Hall, 392-8565, www.dso.ufl.edu/drc/