

**COURSE DESCRIPTION**  
**PLANT PATHOLOGY 455 & INTERNATIONAL STUDIES 455**  
**"BIOTERRORISM: AN OVERVIEW"**  
**WINTER QUARTER 2006**

This course provides a broad introduction and awareness of the threat of bioterrorism to national and global security. Following an introduction to historic events and government agencies involved in bioterrorism, the course focuses on the impact of bioterrorism on our food supply, animal/ livestock, and public health.

**Instructors:** C. R. Curtis, Course Facilitator, Plant Pathology, 246 Kottman Hall, 614-292-4854, office hours by appointment, email [curtis.6@osu.edu](mailto:curtis.6@osu.edu) FAX: 614-292-4455

**Lecturers:** Michael J. Boehm, Plant Pathology  
Jeffrey Lewis, International Studies  
Mo Saif, Veterinary and Preventive Medicine/OARDC  
Jeffrey Lejeune Veterinary and Preventive Medicine/OARDC  
Randi Love, School of Public Health

**Graduate Teaching Associate:** To be determined

**Required Textbook:** Miller, J., S. Engelberg, and W. Broad. 2002. *Germs*. Simon & Schuster, OR Alex P. Schmid and Albert J. Jongman. 2005. *Political Terrorism: A New Guide to Actors, Authors, Concepts, Data Bases, Theories, and Literature*. Transaction Publishers.

**Credit:** 5 credit hours

**Prerequisite:** Junior or Senior standing

**Course Structure:** Two 2-hour 18 minute lecture/discussion periods

**Course Objectives:** Upon completion of the course, students should be able to:

1. Outline the broad history of bioterrorism and how it differs from other types of warfare.
2. Describe Homeland Security and other related government programs to combat bioterrorism.
3. Demonstrate a working knowledge of the vulnerability of soft targets in agriculture such as food crops, animals and livestock and public health.
4. Describe the current organized initiatives to combat bioterrorism.

5. Advise students on career and employment opportunities in Homeland Security
6. Discuss the importance of bioterrorism in national and global security

**Grading:** Final grades will be based upon points accumulated as follows:

Midterm Exam	100 points	(One midterm)
Quizzes	25 points	(5 short in-class quizzes)
Issue Papers (3)	150 points	(Each paper 50 points)
Participation	25 points	(Class participation based on attendance, attitude, cooperation with group and participation in class discussions)
Final Exam	100 points	(One final)
<b>TOTAL</b>	<b>400 points</b>	

Total points accumulated will be used as the basis for the final course grade as follows: (some percentages approximate)

93%-100%	(372-400 points)	=	A
90%-92%	(360-371 points)	=	A-
87%-89%	(348-359 points)	=	B+
83%-86%	(332-346 points)	=	B
80%-82%	(320-331 points)	=	B-
77%-79%	(308-319 points)	=	C+
73%-76%	(292-307 points)	=	C
70%-72%	(280-291 points)	=	C-
67%-69%	(268-279 points)	=	D+
60%-66%	(240-267 points)	=	D
<60%	(< 240 points)	=	E

### **Statement of Student Rights**

A student with a documented disability who may require special accommodations should self-identify to the instructor as early in the quarter as possible to receive effective and timely accommodations.

### **Academic Accommodations Statement**

Students requiring an accommodation based on the impact of a disability should contact the instructor to arrange an appointment as soon as possible. During the appointment the instructor and student can discuss the course format, anticipate your needs, and explore the potential accommodations. The instructor will rely on the Office of Disability Services for assistance in verifying the need for

accommodations and developing accommodation strategies. If the student has not previously contacted the Office for Disability Services the student is encouraged to so.

**Academic Misconduct:**

Academic misconduct of any kind will not be tolerated. The term "academic misconduct" includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. (Faculty Rule 3335-5-487). All suspected cases of academic misconduct will be reported to the University Committee on Academic Misconduct. For this course, potential academic misconduct issues arise for examinations and quizzes, as discussed below:

**Examinations and Quizzes:** Copying answers from another student or using unauthorized notes will be considered as academic misconduct.

**CLASS SCHEDULE WINTER QUARTER 2006  
BIOTERRORISM: AN OVERVIEW.**

**Plant Pathology 455 co-listed with  
International Studies 455  
Class Schedule (subject to change)  
Time: 9 a.m –11:18 a.m., Tuesday and Thursday  
Place: To Be Announced**

- Session 1**      Get acquainted activity  
January 3      Course introduction, syllabus, schedule,  
Tuesday      Administer student pre-test  
Definitions: terrorism, bioterrorism, biosecurity, etc.  
Homeland Security Overview: "General discussion of bioterrorism" by Dr. Todd Stewart, Major General (ret.),  
(Dr. Chuck Curtis, Plant Pathology)
- Session 2**      Nuclear, Biological, and Chemical Weapons: Security Issues in the Post-  
January 5      Cold War World; The Psychological Impact of Terrorism and the  
Thursday      Psychological Profiles of Terrorists (Dr. Jeffrey Lewis, International  
Studies)
- Session 3**      Understanding Risk and Security Trade-offs; in-class exercise on  
January 10      risk/threat perception; "Controlled Pestilence:" A Brief History of Biological  
Tuesday      Weapons; Historic coverage of terrorism actions and impacts (Dr. Jeffrey  
Lewis, International Studies)
- Session 4**      Agencies & Organizations involved, pre-9/11 and post-9/11 changes in  
January 12      infrastructure, political and policy changes  
Thursday      Field experiences with military and NATO (Dr. Mike Boehm, Plant  
Pathology)
- Session 5**      The 'big picture,' Networks, Role of the Land Grant System in global and  
January 17      national food and fiber production, Food (plant and animal health) crops  
Tuesday      and livestock, Medical and Public health, Bioshield program, zoonotics.  
(Dr. Mike Boehm, Plant Pathology)
- Session 6**      Nationally known guest speaker on bioterrorism and the response,  
January 19      decontamination in real life situations (e.g. Hart Senate Office building),  
Thursday      Preparing for a biological attack  
Federal agencies: DHS-FEMA, FBI, USDA, HHS-CDC, FDA  
State Agencies, National Plant and Animal Disease Network, Professional Societies (plant, animal, and public health)

- Session 7** Student position paper #1 due (papers chosen from a select list of topics, 4 page paper with references on selected topics)  
 January 24 Tuesday Rap session and open discussion with students (1<sup>st</sup> hour), Introduction to basics in Microbiology and Plant Pathology (Dr. Chuck Curtis, Plant Pathology & Dr. Jeffrey Lewis, International Studies)
- Session 8** Overview of Plants, Animals/Livestock, and Public Health (video on Public Health), Commonalities, the Disease Triangle concept, epidemics, pandemics, National diagnostic centers, early and first responders Instant Command System (ICS), National Incident Management System (NIMS) (Dr. Chuck Curtis, Plant Pathology)  
 January 26 Thursday
- Session 9** Plants and diseases continued, Defects in current regulatory approaches, responding to bioterrorism, What is needed? How safe are you? (Risks, risk management and risk characterization) (Dr. Chuck Curtis, Plant Pathology)  
 January 31 Tuesday
- Session 10** Guest speaker (possibly Dr. Larry Madden) 1<sup>st</sup> hour, bioterrorism game 'jeopardy' review for the midterm.  
 February 2 Thursday (Dr. Chuck Curtis, Plant Pathology)
- Session 11** Midterm examination, Student group activity  
 February 7 Tuesday (Dr. Chuck Curtis, Plant Pathology)
- Session 12** Introduction to Animal Health and Livestock Issues  
 February 9 Thursday (coordinated with Dr. Roth, Iowa State University, Dr. Mo Saif, and Dr. Jeff Lejeune, OARDC)
- Session 13** Animal Health and Livestock Issues: highly contagious diseases of food animals (cattle, cows, swine, sheep, poultry), disease characteristics and disease triangle. (Dr. Mo Saif, and Dr. Jeff Lejeune, OARDC)  
 February 14 Tuesday
- Session 14** Guest Speaker: Dr. Roth, Animal Health and Livestock Issues: How food animal diseases can become weapons of mass destruction, economic considerations and global aspects (Dr. Mo Saif, and Dr. Jeff Lejeune, OARDC)  
 February 16 Thursday
- Session 15** Guest Speaker continuation: Animal Health and Livestock Issues  
 February 21 Tuesday Student position paper #2 due  
 Review of Animal Health/Livestock Issues  
 (Dr. Mo Saif, and Dr. Jeff Lejeune, OARDC)

**Session 16** Introduction to Public Health Issues  
**February 23** Public Health Definitions, National Response, NIMS, Local Response  
**Thursday** What is Public Health? Characteristics of disease-anthrax, plagues, botulism, etc. How does this relate to bioterrorism and our response? What does an epidemic look like? (Dr. Randi Love, Public Health)

**Session 17** Public Health Issues  
**February 28** Crisis communication, Small group exercise, Which organisms are  
**Tuesday** important? (Dr. Randi Love, Public Health)

**Session 18** Public Health Issues  
**March 2** Table top exercises, small group, Extremist Earth 1<sup>st</sup> Rights Group  
**Thursday** Professional Society responses  
 Small group work and "what if" scenarios -Would you come to work if attacked? (Dr. Randi Love, Public Health)

**Session 19** Student position paper #3 due  
**March 7** Public Health Issues-preparedness  
**Tuesday** Competing public health priorities  
 Panel of experts EMS, firemen, police, etc., Competing Public Health priorities. (Dr. Randi Love, Public Health)

**Session 20** Summary, Review, and Discussions  
**March 9** Administer student post-test, job opportunities  
**Thursday** Complete Course and Instructor(s) Evaluations  
 (Dr. Chuck Curtis, Plant Pathology)

**March 13-16** Final Examination (finals week)

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Short videos will be shown in class to supplement the issues and issue formation process. In addition, guest lectures who are authorities in their fields will present sessions on bioterrorism and its national and global ramifications. Group projects, scenarios, and case studies will be used to illustrate and enhance the lecture content.

Reading List: (incomplete, needs to be expanded by the teaching team)

Required:

Miller, J., S. Engelberg, and W. Broad. 2002. *Germs*. Simon & Schuster, OR  
 Alex P. Schmid and Albert J. Jongman. 2005. *Political Terrorism: A New Guide to Actors, Authors, Concepts, Data Bases, Theories, and Literature*. Transaction Publishers.

Videos:

"The coming plague" Laurie Garrett (video)  
 "Avoiding Armageddon" (video selection)  
 "Bioterrorism" (NOVA)