

College of Public Health & Health Professions
PHC 6515
An Introduction to Entomology, Zoonotic Diseases, and Food Safety
Spring 2011
Saturday, May 21, 8AM-12PM
Monday – Friday, May 23-27, 8AM-5PM
HPNP rooms G101 or G114

Instructor Information

Course director: Gregory C. Gray, MD, MPH
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Office hours arranged

Other instructors: Various

Course Description

This 3 semester hour course will introduce public health students to entomology, zoonotic diseases, and principals of modern food safety. Students will learn methods for conducting studies of mosquitoes and ticks, controlling zoonotic diseases, and protecting food supply. A special focus will be upon modern food safety techniques in meat, dairy and produce production. Lectures will be complemented with considerable field work.

Course Pre-requisites

One of the following courses (or equivalent):
General Microbiology
Principles of Infectious Diseases
Epidemiology of Infectious Diseases

Course Objectives and/or Goals

After completing this course, the student should be able to:

- Have a fundamental understanding of methods for mosquito collection, identification, and control;
- Be familiar with methods for tick collection, identification, and control;
- Have an appreciation for zoonotic disease prevention and control in the agricultural industry;
- Be familiar with methods for monitoring food-borne pathogens.

Course Materials

Required text: Krauss H, Weber A, Appel M, Enders B, Isenberg HD, Schiefer HG, Slenczka W, Von Graevenitz A, Zahner H. editors. *Zoonoses. Infectious Diseases Transmissible from Animals to Humans*, 3rd edition. ASM Press, 2003

Course Requirements/Evaluation/Grading

Students will be evaluated by their class participation (33%) and a 90-minute, open book, open notes, examination (33%), and a 6-10 page term paper on a 5 zoonotic disease problems the student's home country (33%) due by mid July. To earn a B for class participation, students should fully participate and attend every session. To earn an A in classroom participation, students must attend each session and demonstrate that they prepared for lectures/fieldtrips beforehand (through reading assigned text and interacting with the lecturers).

Percentage or points earned in class	93%-100%	90%-92%	87%-89%	83%-86%	80%-82%	77%-79%	73%-76%	70%-72%	67%-69%	63%-66%	60%-62%	Below 60%
Letter Grade equivalent	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	F

Letter Grade	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E	WF	I	NG	S-U
Grade Points	4.0	3.67	3.33	3.0	2.67	2.33	2.0	1.67	1.33	1.0	0.67	0.0	0.0	0.0	0.0	0.0

For greater detail on the meaning of letter grades and university policies related to them, see the Registrar's Grade Policy regulations at <http://www.registrar.ufl.edu/catalog/policies/regulationgrades.html>

Statement of University's Honesty Policy (cheating and use of copyrighted materials)

Each student is bound by the academic honesty guidelines of the University and the student conduct code printed in the Student Guide and on the University website. The Honor Code states: "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity." Cheating or plagiarism in any form is unacceptable and inexcusable behavior.

Attendance Policy

Attendance is mandatory.

Policy Related to Make-up Exams or Other Work

Attendance and Make-up Work – I expect you to attend and be prepared to participate in all class sessions. Personal issues with respect to class attendance or fulfillment of course requirements will be handled on an individual basis.

Topical Outline

Day/Lecture	Title	Lecturer	Readings (pages)
Saturday 8AM HPNP G114	Welcome, course introduction (10 min)		
Saturday 8:10-9AM	One Health	Gray	
Saturday 9-11	Zoonotic influenza and occupational risk	Gray	133-139
Saturday 11-12	Other zoonotic diseases among avian species and food safety (salmonellosis, chlamydiosis, colibacillosis, campylobacteriosis, etc.)	Barr	188-89, 191-193, 196-200, 234-237
Mosquito and Tick Borne Diseases (Lectures covering basic biology, life cycle, habitats, surveillance methods)			
Monday 8.00AM CRGC Room 184	Introduction	Okech	xi-xiv, 49-51, 4-14;27-31;46-48
8.15AM	Mosquito biology and anatomy	Okech	
9.00AM	Mosquito-borne diseases	Okech	
10.00AM	Mosquito surveillance methods	LT. Mejeoumov/ HM1 Francona	
11.00AM	<u>Lab session:</u> Mosquito identification and dissection	Okech, Barr	
12.00	Lunch break		
1.00PM	Tick biology and life cycles	Lord	
1.30PM	Tick-borne diseases	Lord	
2.00PM	Surveillance methods for ticks	Lord	
2.30PM	Methods for tick control	Lord	
3.00PM	<u>Lab session:</u> Tick identification/dissection	Lord, Okech	
Mosquito and Tick Field Work			
Tuesday 7:15AM	Bus to Austin Cary Memorial Learning Center, Waldo Road (takes about 30min to get there in traffic) All students to wear long sleeve shirts and trousers, light colored clothing better. It may be muddy.		
8.30AM	Collection of traps and preliminary identification of mosquitoes	Okech, Barr LTJG Tony Hughes LTJG Noel Cote HM1 Francona	
9:00AM	Adult mosquito trapping techniques, mosquito trap set up	Okech, Barr LTJG Tony Hughes LTJG Noel Cote HM1 Francona	
10.00AM	Dipping and collection techniques for larvae	Okech, Barr	
11.00AM	Chemical control of mosquitoes and ticks - equipment overview	Mr. Vince Smith EN1 Pomalescordero	
12.00PM	Lunch break		
1.00AM	Tick sampling methods: tick drag, CO2 bait	Lord	
2.00PM	Preliminary ID of ticks	Lord	
3.00PM	Mosquito control - ULV and Space	Mr. Vince Smith	

<u>Day/Lecture</u>	<u>Title</u>	<u>Lecturer</u>	<u>Readings (pages)</u>
	spray demonstrations	EN1 Pomalescordero	
4.00PM	Tick control - Broadcast insecticide application demonstrations	Mr. Vince Smith EN1 Pomalescordero	
Zoonotic Diseases & Food Safety I			
Wednesday 7:15AM	Bus leaves hotel at for Pilgrim's Pride Corporation 19740 US90, Live Oak, FL 32060-8753, tel 386-362-2544 (modern poultry production; arrive 9AM)	Gray	Please remember do not wear open-toed shoes, high heels, and jewelry
Wednesday 9-12AM	Pilgrim's Pride Corporation	Host - Mr. Eric Erickson	
	Lunch on the bus ride back to UF		
Wednesday 1-2PM G101	Diseases due to bartonella species	Gray	176-179
Wednesday 2-3PM G101	Special video & discussion	Gray	
Wednesday 3-4PM G101	Aquatic life and zoonotic diseases	Waltzek	
Wednesday 4-5PM G101	Reducing the risk of zoonotic disease transmission in the dairy industry (Brucellosis, Q fever, etc.)	Nicholetti	203-5, 185-9, 205-7, 229-231, 234-6, 278-80
Zoonotic Diseases & Food Safety II			
Thursday 7:45AM	Bus to Cedar Key Marine Field Station	Gray Walzek	
Thursday 10-12AM	Cedar Key Marine Field Station (bivalve aquaculture and food safety lectures/visit clam processing plant)	Sturmer, Roy	
	Lunch on the bus ride back to UF		
Thursday 1:30-2:30PM G114	Poxvirus infections	Rice	151-161
Thursday 2:30-3:30PM G114	Zoonotic infections associated with domestic pets (hookworm, toxoplasmosis, salmonellosis)	Krueger	307-312, 362, 369
Thursday 3:30-5:30PM G114	Small group zoonotic disease exercise	Gray	
Zoonotic Diseases & Food Safety III			
Friday 7:30AM /	Bus to North Florida Holsteins 2740 West County Rd 232 Bell, FL 32619-7174, tel 352-463-7174 (modern dairy farm; arrive 10AM)	Gray	
9-11:30AM	North Florida Holsteins	Host - David Temple (Diary Manager)	
	Lunch on the bus ride back to UF		
Friday 1-2PM G114	Uncommon zoonoses: Hendra virus, Nipah virus, foot & mouth disease, and newly emergent diseases	Atanosova	123-127; 141-143
Friday 2-3PM G114	Lyme disease & giardiasis	Gray	180-183; 280-282
Friday 3-5PM G114	Final exam (90 minutes, multiple choice, open notes) bring calculator	Gray	

Statement Related to Accommodations for Students with Disabilities

Accommodations for Students with Disabilities

If you require classroom accommodation because of a disability, you must first register with the Dean of Students Office (<http://www.dso.ufl.edu/>). The Dean of Students Office will provide documentation to you, which you then give to the instructor when requesting accommodation. The College is committed to providing reasonable accommodations to assist students in their coursework.

Counseling and Student Health

Students may occasionally have personal issues that arise in the course of pursuing higher education or that may interfere with their academic performance. If you find yourself facing problems affecting your coursework, you are encouraged to talk with an instructor and to seek confidential assistance at the University of Florida Counseling Center, 352-392-1575, or Student Mental Health Services, 352-392-1171. Visit their web sites for more information: <http://www.counsel.ufl.edu/> or <http://www.health.ufl.edu/shcc/smhs/index.htm#urgent>

The Student Health Care Center at Shands is a satellite clinic of the main Student Health Care Center located on Fletcher Drive on campus. Student Health at Shands offers a variety of clinical services, including primary care, women's health care, immunizations, mental health care, and pharmacy services. The clinic is located on the second floor of the Dental Tower in the Health Science Center. For more information, contact the clinic at 392-0627 or check out the web site at: www.health.ufl.edu/shcc

Crisis intervention is always available 24/7 from:
Alachua County Crisis Center: (352) 264-6789.

BUT – Do not wait until you reach a crisis to come in and talk with us. We have helped many students through stressful situations impacting their academic performance. You are not alone so do not be afraid to ask for assistance.