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
College of Public Health & Health Professions
101 S. Newell Dr, Suite 2150A
Gainesville Florida 32610
(352) 273-9449/9188
gcgray@phhp.ufl.edu
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


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).

<table>
<thead>
<tr>
<th>Percentage or points earned in class</th>
<th>93%–100%</th>
<th>90%–92%</th>
<th>87%–89%</th>
<th>83%–86%</th>
<th>80%–82%</th>
<th>77%–79%</th>
<th>73%–76%</th>
<th>70%–72%</th>
<th>67%–69%</th>
<th>63%–66%</th>
<th>60%–62%</th>
<th>Below 60%</th>
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<tbody>
<tr>
<td>Letter grade equivalent</td>
<td>A</td>
<td>A-</td>
<td>B+</td>
<td>B</td>
<td>B-</td>
<td>C+</td>
<td>C</td>
<td>C-</td>
<td>D+</td>
<td>D</td>
<td>D-</td>
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<thead>
<tr>
<th>Letter grade</th>
<th>A</th>
<th>A-</th>
<th>B+</th>
<th>B</th>
<th>B-</th>
<th>C+</th>
<th>C</th>
<th>C-</th>
<th>D+</th>
<th>D</th>
<th>D-</th>
<th>E</th>
<th>WF</th>
<th>I</th>
<th>NG</th>
<th>S-U</th>
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<tbody>
<tr>
<td>Grade points</td>
<td>4.0</td>
<td>3.67</td>
<td>3.33</td>
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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](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.
<table>
<thead>
<tr>
<th>Day/Lecture</th>
<th>Title</th>
<th>Lecturer</th>
<th>Readings (pages)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saturday 8AM</td>
<td>Welcome, course introduction (10 min)</td>
<td></td>
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<tr>
<td>HPNP G114</td>
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<tr>
<td>Saturday 8:10-9AM</td>
<td>One Health</td>
<td>Gray</td>
<td></td>
</tr>
<tr>
<td>Saturday 9-11</td>
<td>Zoonotic influenza and occupational risk</td>
<td>Gray</td>
<td>133-139</td>
</tr>
<tr>
<td>Saturday 11-12</td>
<td>Other zoonotic diseases among avian species and food safety (salmonellosis, chlamydiosis, colibacillosis, campylobacteriosis, etc.)</td>
<td>Barr</td>
<td>188-89, 191-193, 196-200, 234-237</td>
</tr>
<tr>
<td><strong>Mosquito and Tick Borne Diseases (Lectures covering basic biology, life cycle, habitats, surveillance methods)</strong></td>
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<tr>
<td>Monday</td>
<td></td>
<td></td>
<td>xi-xiv, 49-51, 4-14, 27-31, 46-48</td>
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<tr>
<td>8.00AM CRGC Room 184</td>
<td>Introduction</td>
<td>Okech</td>
<td></td>
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<tr>
<td>8.15AM</td>
<td>Mosquito biology and anatomy</td>
<td>Okech</td>
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<tr>
<td>9.00AM</td>
<td>Mosquito-borne diseases</td>
<td>Okech</td>
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<tr>
<td>10.00AM</td>
<td>Mosquito surveillance methods</td>
<td>LT. Mejeoumov/ HM1 Francona</td>
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<tr>
<td>11.00AM</td>
<td>Lab session: Mosquito identification and dissection</td>
<td>Okech, Barr</td>
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<tr>
<td>12.00</td>
<td>Lunch break</td>
<td></td>
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<tr>
<td>1.00PM</td>
<td>Tick biology and life cycles</td>
<td>Lord</td>
<td></td>
</tr>
<tr>
<td>1.30PM</td>
<td>Tick-borne diseases</td>
<td>Lord</td>
<td></td>
</tr>
<tr>
<td>2.00PM</td>
<td>Surveillance methods for ticks</td>
<td>Lord</td>
<td></td>
</tr>
<tr>
<td>2.30PM</td>
<td>Methods for tick control</td>
<td>Lord</td>
<td></td>
</tr>
<tr>
<td>3.00PM</td>
<td>Lab session: Tick identification/dissection</td>
<td>Lord, Okech</td>
<td></td>
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<tr>
<td><strong>Mosquito and Tick Field Work</strong></td>
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<tr>
<td>Tuesday</td>
<td>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.</td>
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<tr>
<td>7:15AM</td>
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<tr>
<td>8.30AM</td>
<td>Collection of traps and preliminary identification of mosquitoes</td>
<td>Okech, Barr</td>
<td>LTJG Tony Hughes LTJG Noel Cote HM1 Francona</td>
</tr>
<tr>
<td>9:00AM</td>
<td>Adult mosquito trapping techniques, mosquito trap set up</td>
<td>Okech, Barr</td>
<td>LTJG Tony Hughes LTJG Noel Cote HM1 Francona</td>
</tr>
<tr>
<td>10.00AM</td>
<td>Dipping and collection techniques for larvae</td>
<td>Okech, Barr</td>
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<tr>
<td>11.00AM</td>
<td>Chemical control of mosquitoes and ticks - equipment overview</td>
<td>Mr. Vince Smith</td>
<td>EN1 Pomalescordero</td>
</tr>
<tr>
<td>12.00PM</td>
<td>Lunch break</td>
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<tr>
<td>1.00AM</td>
<td>Tick sampling methods: tick drag, CO2 bait</td>
<td>Lord</td>
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<tr>
<td>2.00PM</td>
<td>Preliminary ID of ticks</td>
<td>Lord</td>
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<tr>
<td>3.00PM</td>
<td>Mosquito control - ULV and Space</td>
<td>Mr. Vince Smith</td>
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<td>Day/Lecture</td>
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<tr>
<td>4.00PM</td>
<td>spray demonstrations</td>
<td>EN1 Pomalescordero</td>
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<tr>
<td></td>
<td>Tick control - Broadcast insecticide application demonstrations</td>
<td>Mr. Vince Smith EN1 Pomalescordero</td>
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**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**

- **Wednesday 1-2PM**  
  G101  
  Diseases due to bartenella 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**

- **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 / 9-11:30AM**  
  Bus to North Florida Holsteins 2740 West County Rd 232 Bell, FL 32619-7174, tel 352-463-7174 (modern dairy farm; arrive 10AM)  
  **Gray**  
  Host - David Temple (Diary Manager)

- **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.