

# Cover Sheet: Request 9854

## ENY4XXX-Ecology of vector-borne disease

### Info

Process	Course New Ugrad/Pro
Status	Pending
Submitter	Burkett-Cadena,Nathan Daniel nburkettcadena@ufl.edu
Created	12/1/2014 1:39:31 PM
Updated	8/31/2015 11:33:42 AM
Description	This course introduces the critical components of vector-borne disease systems and the basic concepts inherent to disease ecology. The course also focuses on various vector-borne diseases of humans and wildlife and how aspects of the environment and host/vector biology influence disease transmission. Other topics include epidemiology, transmission models and emerging diseases

### Actions

Step	Status	Group	User	Comment	Updated
Department	Approved	CALS - Entomology and Nematology 514914000	Capinera, John Lowell		1/16/2015
Deleted ucc1_Burkett-Cadena_undergrad.docx					12/1/2014
Deleted Burkett_syllabus_UF_ENY_4905-6905.pdf					12/1/2014
College	Recycled	CALS - College of Agricultural and Life Sciences	Brendemuhl, Joel H	Reviewed and decision to recycle was made by CALS CC on 2/13/15. Corrections have been sent to Nathan Burkett-Cadena.	2/20/2015
No document changes					
Department	Approved	CALS - Entomology and Nematology 514914000	Mcauslane, Heather J		2/26/2015
Added ucc1_Burkett-Cadena_4XXX.docx					2/26/2015
Added Burkett_syllabus_UF_ENY_4XXX-6XXX.pdf					2/26/2015
College	Approved	CALS - College of Agricultural and Life Sciences	Brendemuhl, Joel H	Approved at CALS CC May 2015 meeting.	8/31/2015
Added ENY 4XXX 6XXX BurkettCadena_ucc_consult_Soils.pdf					3/9/2015
Added WEC consult_ENY 4XXX_Ecology of Vector-borne Diseases.pdf					3/9/2015
Added WEC consult_ENY 6XXX_Ecology of Vector-borne Diseases.pdf					3/9/2015
Added ucc_consult-BOkech.pdf					3/20/2015
Replaced Consult_response_letter_Burkett-Cadena_ENY.pdf					5/6/2015
Deleted SyllabusPHC6512Fall2013.pdf					5/5/2015
Added PHC 6515 syllbabus.pdf					5/5/2015
Added Consult_response_letter_Burkett-Cadena_ENY.pdf					5/6/2015
University Curriculum Committee	Pending	PV - University Curriculum Committee (UCC)			8/31/2015
No document changes					

<b>Step</b>	<b>Status</b>	<b>Group</b>	<b>User</b>	<b>Comment</b>	<b>Updated</b>
Statewide Course Numbering System					
No document changes					
Office of the Registrar					
No document changes					
Student Academic Support System					
No document changes					
Catalog					
No document changes					
College Notified					
No document changes					

**Recommended SCNS Course Identification**

1. Prefix ENY      2. Level 4      3. Number XXX      4. Lab Code None

5. Course Title Ecology of vector-borne disease  
 6. Transcript Title (21 character maximum) Ecol vect-borne dis

7. Effective Term Fall      8. Effective Year 2015      9. Rotating Topic? No  
 10. Amount of Credit 2      11. If variable, # minimum and # maximum credits per semester.  
 12. Repeatable credit? No      13. If yes, total repeatable credit allowed #  
 14. S/U Only? No      15. Contact Type Regularly Scheduled [base hr]  
 16. Degree Type Baccalaureate      17. If other, please specify: [Click here to enter text.](#)  
 18. Category of Instruction Intermediate

**19. Course Description**

This course introduces the critical components of vector-borne disease systems and the basic concepts inherent to disease ecology. The course also focuses on various vector-borne diseases of humans and wildlife and how aspects of the environment and host/vector biology influence disease transmission. Other topics include epidemiology, transmission models and emerging diseases.

**20. Prerequisites**

General Biology or equivalent

**21. Co-requisites**

None

**22. Rationale and Placement in Curriculum**

Vector-borne diseases affect humans, wildlife and agriculture more than any other group of infectious diseases. Researchers, policy makers, and public health workers need a firm understanding of the ecology of vector-borne diseases to effectively predict and interrupt epidemics. This course introduces the foundations of disease ecology and current paradigms of vector-borne disease transmission.

23. Complete the syllabus checklist on the next page of this form.

## Syllabus Requirements Checklist

The University's complete Syllabus Policy can be found at:

[http://www.aa.ufl.edu/Data/Sites/18/media/policies/syllabi\\_policy.pdf](http://www.aa.ufl.edu/Data/Sites/18/media/policies/syllabi_policy.pdf)

The syllabus of the proposed course **must** include the following:

- Course title
- Instructor contact information (if applicable, TA information may be listed as TBA)
- Office hours during which students may meet with the instructor and TA (if applicable)
- Course objectives and/or goals
- A weekly course schedule of topics and assignments.
- Methods by which students will be evaluated and their grades determined
- Information on current UF grading policies for assigning grade points. This may be achieved by including a link to the appropriate undergraduate catalog web page:  
<https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>.
- List of all required and recommended textbooks
- Materials and Supplies Fees, if any
- A statement related to class attendance, make-up exams and other work such as: *"Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found in the online catalog at: <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>."*
- A statement related to accommodations for students with disabilities such as: *"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."*
- A statement informing students of the online course evaluation process such as: *"Students are expected to provide feedback on the quality of instruction in this course based on 10 criteria. These evaluations are conducted online at <https://evaluations.ufl.edu>. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at <https://evaluations.ufl.edu/results>."*

It is **recommended** that the syllabus contain the following:

- Critical dates for exams or other work
- Class demeanor expected by the professor (e.g. tardiness, cell phone usage)
- The university's honesty policy regarding cheating, plagiarism, etc.

*Suggested wording: UF students are bound by The Honor Pledge which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." The Honor Code (<http://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.*

- Contact information for the Counseling and Wellness Center: <http://www.counseling.ufl.edu/cwc/>, 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies

## ENY 4XXX / 6XXX ECOLOGY OF VECTOR-BORNE DISEASE – Problems in Entomology

**SHORT TITLE – Ecol Vect-Borne Dis**

**2 credit hours**

**Fall, 2014**

### **INSTRUCTOR**

Nathan Burkett-Cadena, PhD  
UF Entomology and Nematology Department  
Email: [nburkettcadena@ufl.edu](mailto:nburkettcadena@ufl.edu)  
Office: Florida Medical Entomology Laboratory,  
Vero Beach, FL 32962 (772) 778-7200 ext 141  
Office hours: Mon, Wed (9:00 - 10:00 a.m.)

### **DISTANCE DELIVERY - CANVAS**

**TEXTBOOKS** - No required textbook

Recommended texts:

*Disease Ecology: Community Structure and Pathogen Dynamics*, by S. Collinge & C. Ray

*Medical and Veterinary Entomology, 2<sup>nd</sup> edition*  
by G. Mullen & L. Durden

**LECTURE MATERIAL** - Provided by instructor

**PREREQUISITES:** *General Biology*

### **Course Purpose and Description**

Vector-borne pathogens affect humans, wildlife and agriculture more than any other group of infectious disease. Researchers, policy makers, and public health workers need a firm understanding of the ecology of vector-borne pathogens to effectively predict and interrupt epidemics.

This course begins with an introduction to the components inherent to vector-borne disease systems and the basic concepts of disease ecology. The course then focuses on various pathogens and how aspects of the environment, and host and vector biology influence pathogen transmission. Some of the questions that we will address include: Why do epidemics occur where and when they do? Why are some pathogens, such as dengue, re-emerging? Why do most vector-borne pathogens have limited geographic ranges?

### **LECTURE SCHEDULE – Fall Semester 2014**

#### **DATES and TOPICS**

Week 1 (Aug 26, 28) – Introduction: What is a vector? What is a parasite? What is a pathogen?

Week 2 (Sep 2, 4) – Arthropod vectors: Biology of Insects and mites

Week 3 (Sep 9, 11) – Non-arthropod-vectors: Biology of vertebrates

Week 4 (Sep 16, 18) – Ecology, Pathogen environmental adaptation (guest lecture)

Week 5 (Sep 23, 25) – Zoonoses and Anthroponoses

Week 6 (Sep 30, Oct 2) – SIR Models (with guest lecture)

Week 7 (**Oct 7, 9**) – **Exam 1**; Rabies, hantavirus and ebola

Week 8 (Oct 14, 16) - Dengue fever, yellow fever, and chikungunya

Week 9 (Oct 21, 23) – Bluetongue virus (guest lecture) and eastern equine encephalitis

Week 10 (Oct 28, 30) - West Nile virus

Week 11 (Nov 4, 6) – Plague and tularemia

Week 12 (Nov 13) – Huanglongbing / citrus greening (guest lecture)

Week 13 (Nov 18, 20) - Lyme disease

Week 14 (Nov 25) – Chagas Disease

Week 15 (Dec 2, 4) - Malaria and river blindness

Week 16 (**Dec 9**) – **Exam 2 (all students) & Review article due (ENY 6XXX only)**

Critical dates: Exam 1: October 7, 2014; Exam 2 & Review article: December 9, 2014

**COURSE GOALS:** *By the end of this course, students will:*

1. Understand the distinctions between vector-borne and directly transmitted pathogens.
2. Have a working understanding of concepts of epidemiological models.
3. Understand the factors that limit, initiate, maintain and spread the transmission of vector-borne pathogens.
4. Gain knowledge about varied pathogens transmitted by diverse vector groups.

**COURSE WEBSITE:** Canvas login at <http://lss.at.ufl.edu>

**GRADING:**

For students enrolled in 4XXX, the grade is based upon equally weighted midterm and final exams. Midterm = 50%; Final = 50%.

For students enrolled in 6XXX, the overall grade is based upon review paper, midterm and final exams. Review paper = 20%; Midterm = 40%; Final = 40%.

Letter grades are assigned on a ten-point scale. 90-100=A; 80-89=B; 70-79=C; 60-69=D; 0-59=E.

**COURSE COMMUNICATIONS:** General questions should be posted on the course discussion board. Private questions about grades and course difficulties should be sent to [nburkettcadena@ufl.edu](mailto:nburkettcadena@ufl.edu).

Requirements for class attendance and make-up exams in this course are consistent with university policies that can be found at:

<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

\*\* Any requests for make-ups due to technical issues MUST be accompanied by the ticket number received from LSS when the problem was reported to them. The ticket number will document the time and date of the problem. You MUST e-mail [nburkettcadena@ufl.edu](mailto:nburkettcadena@ufl.edu) within 24 hours of the technical difficulty if you wish to request a make-up.

Grades cannot be provided over the telephone or by email, but will be available on Canvas in the Gradebook tab.

Very important information on UF grading policies, including Withdrawal, Incomplete grades, and assigning grade points may be found at:

<https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>.

**FEEDBACK:**

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 10 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>.

**UF students are bound by The Honor Pledge**, which states that “members of the University of Florida community pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the

University of Florida, the following pledge is either required or implied: On my honor, I have neither given nor received unauthorized aid in doing this assignment". The Honor Code (<http://www.dso.ufl.edu/sccr/process/student-conduct-honorcode/>) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.

### **LECTURES:**

Lectures can be accessed in Canvas, by going to the Canvas login- <https://lss.at.ufl.edu>. The student's UF Gatorlink username and password are necessary to log into the system. Tutorials are available in Canvas under "Help," if needed.

### **TECHNOLOGY REQUIREMENTS:**

Students must have access to a computer that can view PowerPoint, Flash, and .pdf files, has adequate memory and speed, and meets the minimum standards for UF computer use is needed. The following website explains the University of Florida computer hardware and software policy: [http://dell.techhub.ufl.edu/computer\\_requirement.html](http://dell.techhub.ufl.edu/computer_requirement.html). Contact the UF Computing Help Desk (352-392-4357; [helpdesk@ufl.edu](mailto:helpdesk@ufl.edu)) with any technology problems.

### **COMPLAINTS ABOUT DISTANCE COURSES?**

The instructor will work with you to resolve complaints, however each online distance learning program has a process for, and will make every attempt to resolve, student complaints within its academic and administrative departments at the program level.

See <http://distance.ufl.edu/student-complaints> for more details.

### **STUDENTS WITH DISABILITIES:**

Students requesting accommodation for disabilities must first register with the Dean of Students Office (<http://www.dso.ufl.edu/drc/>). The Dean of Students Office will provide documentation to the student who must then provide this documentation to the instructor when requesting accommodation. You must submit this documentation prior to submitting assignments or taking the quizzes or exams. Accommodations are not retroactive, therefore, students should contact the office as soon as possible in the term for which they are seeking accommodations.

### **GETTING HELP:**

For issues with technical difficulties for Canvas, please contact the UF Help Desk at: [Learning-support@ufl.edu](mailto:Learning-support@ufl.edu), (352) 392-HELP - select option 2, or <https://lss.at.ufl.edu/help.shtml>

Other resources are available at <http://www.distance.ufl.edu/getting-help> for:

- Counseling and Wellness resources (352) 392-1575
- Disability resources
- Resources for handling student concerns and complaints
- Library Help Desk support

**In case of emergency, contact University Police (352) 392-1111 or dial 911**

### **GRADUATE COMPONENT (ENY6XXX):**

The graduate course offers additional opportunities to learn about the ecology of vector-borne diseases through focused readings (see required reading list on page 5, and a review article on a vector-borne disease.

Review article (ENY 6XXX only)

Students enrolled in ENY 6XXX are expected to submit a review article on the ecology of a vector-borne disease of their choosing. The format is flexible, although the article must focus on **Ecology**. The review should summarize relevant scientific literature and must include citations. The review must be a minimum of 2,500 words.

### **NETIQUETTE:**

It is important to recognize that the online classroom is in fact a classroom, and certain behaviors are expected when you communicate with both your peers and your instructors. These guidelines for online behavior and interaction are known as netiquette.

### **SECURITY**

Remember that your password is the only thing protecting you from pranks or more serious harm.

- Don't share your password with anyone
- Change your password if you think someone else might know it
- Always logout when you are finished using the system

### **GENERAL GUIDELINES**

When communicating online, you should always:

- Treat instructor with respect, even in email or in any other online communication
- Always use your professors' proper title: Dr. or Prof., or if you in doubt use Mr. or Ms.
- Unless specifically invited, don't refer to them by first name.
- Use clear and concise language
- Remember that all college level communication should have correct spelling and grammar
- Avoid slang terms such as "wassup?" and texting abbreviations such as "u" instead of "you"
- Use standard fonts such as Times New Roman and use a size 12 or 14 pt. font
- Avoid using the caps lock feature AS IT CAN BE INTERPRETTED AS YELLING
- Limit and possibly avoid the use of emoticons like :) or ☺
- Be cautious when using humor or sarcasm as tone is sometimes lost in an email or discussion post and your message might be taken seriously or offensive
- Be careful with personal information (both yours and other's)
- Do not send confidential patient information via e-mail

### **EMAIL**

When you send an email to your instructor, teaching assistant, or classmates, you should:

- Use a descriptive subject line
- Be brief
- Avoid attachments unless you are sure your recipients can open them
- Avoid HTML in favor of plain text
- Sign your message with your name and return e-mail address
- Think before you send the e-mail to more than one person. Does everyone really need to see your message?
- Be sure you REALLY want everyone to receive your response when you click, "reply all"
- Be sure that the message author intended for the information to be passed along before you click the "forward" button



## MESSAGE BOARD

When posting on the Discussion Board in your online class, you should:

- Make posts that are on topic and within the scope of the course material
- Take your posts seriously and review and edit your posts before sending
- Be as brief as possible while still making a thorough comment
- Always give proper credit when referencing or quoting another source
- Be sure to read all messages in a thread before replying
- Don't repeat someone else's post without adding something of your own to it
- Avoid short, generic replies such as, "I agree." You should include why you agree or add to the previous point
- Always be respectful of others' opinions even when they differ from your own
- When you disagree with someone, you should express your differing opinion in a respectful, non-critical way
- Do not make personal or insulting remarks
- Be open-minded

## REQUIRED READINGS (PROVIDED)

Altizer S, Bartel R, and BA Han (2011) Animal migration and infectious disease risk. *Science*. 331, 296.

Burkett-Cadena, ND (2009) Morphological adaptations of parasitic arthropods, in *Medical and Veterinary Entomology* (Mullen GR and Durden L, eds.), Elsevier, Inc.

Dobson A, Cattadori I, Holt RD et al. (2006) Sacred cows and sympathetic squirrels: the importance of biological diversity to human health. *PLoS Medicine*. 3(6): e231.

Gage KL, Burkot TR, Eisen RJ and EB Hayes (2008) Climate and vectorborne diseases. *American Journal of Preventative Medicine*. 35(5): 436-450.

Gubler DJ (1998) Resurgent vector-borne diseases as a global health problem. *Emerging Infectious Diseases*. 442(3): 442-450.

Hamer GL, Walker E, Brawn JD, et al. (2008) Rapid amplification of West Nile virus: the role of hatch-year birds. *Vector-Borne and Zoonotic Diseases*. 8(1):57-67.

Hamer GL, Kitron UD, Goldberg TL et al. (2009) Host selection by *Culex pipiens* mosquitoes and West Nile Virus Amplification. *American Journal of Tropical Medicine and Hygiene*. 80(2): 268–278.

Pedersen AB and A Fenton (2006) Emphasizing the ecology in parasite community ecology. *Trends in Ecology and Evolution*. 22(6).

Raffel TR, Martin LB and JR Rohr (2008) Parasites as predators: unifying natural enemy ecology. *Trends in Ecology and Evolution*. 23(11).

Tabachnick WJ (2013) Nature, nurture and evolution of intra-species variation in mosquito arbovirus transmission competence. *International Journal of Environmental Research and Public Health*. 10: 249-277

College of Public Health & Health Professions  
 PHC 6515  
 An Introduction to Entomology, Zoonotic Diseases, and Food Safety  
 Spring 2014, 3 Credit Hours

Date	Time	Room
5/17/2014 Sat	8:00am-12:00pm	HPNP G-101
5/19/2014 Mon	8:00am-5:00pm	BSB West/Dry lab (BG-3)
5/20/2014 Tue	8:00am-5:00pm	Austin Carey Forest
5/21/2014 Wed	9:00am-12:00pm	Nettles Sausage Company
	1:00pm-5:00pm	HPNP G-101
	5:30pm-7:00pm	Communicore computer lab C3-13
5/22/2014 Thu	9:00am-12:00pm	Pilgrim's Pride
	1:30pm-5:30pm	HPNP G-101
5/23/2014 Fri	9:00am-12:00pm	North Florida Holsteins
	1:00pm-5:00pm	HPNP G-101

### **Instructor Information**

Course director: Gregory C. Gray, MD, MPH  
 Department of Environmental and Global Health  
 College of Public Health & Health Professions  
 101 S. Newell Dr, Suite 2150A  
 Gainesville Florida 32610  
 (352) 273-9449/9188  
[gcgray@pnhp.ufl.edu](mailto:gcgray@pnhp.ufl.edu)  
 Office hours arranged

Other instructors: Various

### **Course Description**

This 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, 3<sup>rd</sup> edition*. ASM Press, 2003, ISBN:1555812368

### 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 7-10 page term paper on a single 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).

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

<b>Letter Grade</b>	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E	WF	I	NG	S-U
<b>Grade Points</b>	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>

### Topical Outline

<u>Day/Lecture</u>	<u>Title</u>	<u>Lecturer</u>	<u>Readings (pages)</u>
Saturday 8-8:10am HPNP G-101	Welcome, course introduction (10 min)	Greg Gray	
Saturday 8:10-8:45am	Disease threats and population densities	Greg Gray	
Saturday 9-10:45am	Zoonotic influenza and occupational risk	Greg Gray	133-139
Saturday 11-11:45am	Zoonoses of concern from Florida's	Carina Blackmore	

<u>Day/Lecture</u>	<u>Title</u>	<u>Lecturer</u>	<u>Readings (pages)</u>
	State Veterinarian		
<b>Mosquito and Tick Borne Diseases (Lectures covering basic biology, life cycle, habitats, surveillance methods)</b>			
Monday			
8-8:10am Vet Med Basic Science Bldg Rm BG-3	Introduction to lectures	Bernard Okech	xi-xiv, 49-51, 4-14;27-31;46-48
8:10-8:50am	Mosquito biology and anatomy	Bernard Okech	
9:00-9:45am	Mosquito-borne diseases/	Bernard Okech	
9:45-10:30am	Houseflies: Diseases and their control	LT Harwood	
10:30-11:00am	Mosquito surveillance methods & identification resources	CDR Obenauer, LT Arimoto, LT Wright	
11:00-11:45pm	<u>Lab session</u> : Mosquito identification and dissection	Bernard Okech	
12:00-12:30pm	Lunch break		
12:30-1:20pm	Tick biology and life cycles	Lord/Allan	
1:30-2:00pm	Tick-borne diseases	Lord/Allan	
2:00-2:30pm	Surveillance methods for ticks	Lord/Allan	
2:30-2:45pm	Methods for tick control	Lord/Allan	
3:00pm-4:30pm	<u>Lab session</u> : Tick identification/dissection	Lord, Allan	
<b>Mosquito and Tick Field Work</b>			
Tuesday			
7:15am	Bus departs Residence Inn for Austin Cary Memorial Learning Center, Waldo Road (takes about 30min to get there in traffic) Should wear long sleeve shirts and trousers, a hat, sunblock and insect repellent. Light colored clothing is better. Wear shoes for hiking and long socks if you have them. It may be muddy		
8:00am-8:30am	Adult mosquito trapping techniques, mosquito trap set up and collection of traps	Bernard Okech, LT Arimoto; LT Wright, CDR Obenauer	
8:30am-9:00am	Dipping and collection techniques for mosquito larvae	Bernard Okech, LT Arimoto, LT Arimoto, CDR Obenauer	
9:00am-9.30am	Chemical control of mosquitoes and ticks - equipment overview	Mr. Vince Smith, Mr. Ray Platt, EN1 Anderson	
9:30am-10:00am	Mosquito control - ULV and Space spray demonstrations	Mr. Vince Smith, Mr. Ray Platt, EN1 Anderson	
10:00am-11:00am	Tick control - Broadcast insecticide application demonstrations	Mr. Vince Smith, Mr. Ray Platt, EN1 Anderson	
11:00am-1:00pm	Preliminary identification of wild caught mosquitoes (larvae, adults)	Bernard Okech, LT Arimoto, CDR Obenauer, LT Wright	

<u>Day/Lecture</u>	<u>Title</u>	<u>Lecturer</u>	<u>Readings (pages)</u>
1:00 pm-2:00pm	Lunch break		
2:00pm-3:00pm	Tick sampling methods: tick drag, CO2 bait	Lord/Allan	
3:00pm-4:00pm	Preliminary ID of ticks	Lord/Allan	
<b>Zoonotic Diseases &amp; Food Safety I</b>			
Wednesday 8am Anima/Dairy Science Bldg Meat laboratory	Introduction to meat production	Chad Carr/ Larry Eubanks	Meat laboratory
Wednesday 9-12am	Nettles Sausage Company 190 SW County Road 240 Lake City, FL 32025-3607	Chad Carr/ Larry Eubanks	Please remember do not wear open- toed shoes, high heels, and jewelry
Lunch on the bus ride back to UF			
Wednesday 1-2pm HPNP G-101	Brucellosis in cattle	David Pascual	203-5, 185-9, 205-7, 229-231, 234-6, 278-80
Wednesday 2-3pm HPNP G-101	The environment and zoonotic diseases	Song Liang	
Wednesday 3-4pm HPNP G-101	Aquaculture, zoonotic disease, and food safety	Roy Yanong	
Wednesday 4-5pm HPNP G-101	Other zoonotic diseases among avian species and food safety (salmonellosis, chlamydiosis, colibacillosis, campylobacteriosis, etc.)	Salah Uddin Khan/Marissa King	188-89, 191-193, 196-200, 234-237
Communicore computer lab C3-13 5:30pm-7:00pm	Distance learning: SAKAI use	Jenn Wert and Susan White?	
<b>Zoonotic Diseases &amp; Food Safety II</b>			
Thursday 8:00am	Bus leaves hotel at for Pilgrim's Pride Corporation 19740 US90, Live Oak, FL 32060-8753, tel 386-362- 2544 (modern poultry production; arrive 9:30am)	Greg Gray	Take off all jewelry, no cell phones/cameras, wear closed shoes, wear a jacket or sweater.
Thursday 10-12am	Pilgrim's Pride Corporation	Host-Preston Andrews cell 386-249-0080	
Lunch on the bus ride back to UF			
Thursday 1:30-2:30pm HPNP G-101	Zoonotic diseases and wildlife	Ramiro Isaza	
Thursday 2:30-3:30pm HPNP G-101	Zoonotic infections associated with domestic pets (hookworm, toxoplasmosis, salmonellosis)	Song Liang	307-312, 362, 369
Thursday 3:30-5:30pm HPNP G-101	Small group zoonotic disease exercise	Greg Gray	
<b>Zoonotic Diseases &amp; Food Safety III</b>			
Friday 7:30am /	Bus to North Florida Holsteins 2740 West County Rd 232 Bell, FL 32619- 7174, tel 352-463-7174 (modern	Greg Gray	

<u>Day/Lecture</u>	<u>Title</u>	<u>Lecturer</u>	<u>Readings (pages)</u>
	dairy farm; arrive 10am) 3522137013 gotmilk10@aol.com		
9-11:30am	North Florida Holsteins	Host - Don Bennink (manager) and Brenda Cannon	
Friday 1-2pm HPNP G-101	Lunch on the bus ride back to UF Advances in understanding epidemiology of uncommon zoonoses: Hendra virus, Nipah virus, foot & mouth disease, <i>Streptococcus suis</i>	Salah Uddin Khan	123-127; 141-143
Friday 2-3pm HPNP G-101	Lyme disease & giardiasis	Greg Gray	180-183; 280-282
Friday 3-5pm HPNP G-101	Final exam (90 minutes, multiple choice, open notes) bring calculator	Greg Gray	

### **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.

Students must be familiar with various forms of plagiarism. See UF guidelines: <http://web.uflib.ufl.edu/msl/07b/studentplagiarism.html>

### **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.

### **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](http://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.*

External Consultation Results (departments with potential overlap or interest in proposed course, if any)

Department <u>Wildlife Ecology and Conserv.</u>	Name and Title <u>Eric C. Hellgren, Professor and Chair</u>
PhoneNumber <u>352-846-0552</u>	E-mail <u>hellgren@ufl.edu</u>
<p>Comments</p> <p>Based on assessment by the Undergraduate Program Coordinator of WEC and by me, we believe that this course has material that may be important to WEC and CRN majors who are interested in this topic. Emerging disease is a key topical area in wildlife ecology. Expected overlap of this course with existing courses in our department is minimal.</p>	

Department _____	Name and Title _____
PhoneNumber _____	E-mail _____
<p>Comments</p>	

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PhoneNumber _____	E-mail _____
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Department _____	Name and Title _____
PhoneNumber _____	E-mail _____
<p>Comments</p>	

Department _____	Name and Title _____
PhoneNumber _____	E-mail _____
<p>Comments</p>	

External Consultation Results (departments with potential overlap or interest in proposed course, if any)

Department Soil and Water Science	Name and Title Max Teplitski, Graduate Coordinator
Phone Number 3-8189	E-mail maxtep@ufl.edu
Comments As proposed, Ecology of Vector-borne disease does not conflict with the courses taught in our department (by me) Ecology of Waterborne Pathogens 4307/5308	

Department _____	Name and Title _____
Phone Number _____	E-mail _____
Comments _____	

Department _____	Name and Title _____
Phone Number _____	E-mail _____
Comments _____	

External Consultation Results (departments with potential overlap or interest in proposed course, if any)

Department <u>EGH</u>	Name and Title <u>Bernard A. Okech/Research Associate Professor</u>
PhoneNumber <u>352-273-5254</u>	E-mail <u>bokech@ufl.edu</u>
Comments The new course has substantial overlap with PHC 6515 Introduction to Entomology, Zoonotic Diseases, and Food Safety offered in the summer. The objectives of PHC 6515 are to understand major vector borne and zoonotic diseases, their global disease burden, vectors (athropod), public health importance, epidemiology, and current prevention and control approaches. The proposed new course overlaps significantly in Weeks 1,2,5,7,8,9,10,11,13,14 and 15. In addition, the course objectives were not described, so its not clear if the focus is on ecology or modeling.	

Department _____	Name and Title _____
PhoneNumber _____	E-mail _____
Comments	

Department _____	Name and Title _____
PhoneNumber _____	E-mail _____
Comments	

5 May 2015

Dear Members of the CALS Curriculum Committee,

This letter is intended to demonstrate the independence of my proposed courses (ENY 4XXX and ENY 6XXX: Ecology of Vector-borne Disease) from that of PHC 6515: Introduction to Entomology, Zoonotic Diseases, and Food Safety, taught by Bernard Okech, Department of Environmental & Global Health. While several topics in the two courses are of nominal similarity, the subject matter, focus and audience are fundamentally different.

The UF Graduate School Catalog description of Dr. Okech's course is "Methods for conducting studies of mosquitoes and ticks, controlling zoonotic diseases, and modern food safety techniques in meat, dairy, and produce production."

([http://gradcatalog.ufl.edu/preview\\_course\\_nopop.php?catoid=6&coid=91244](http://gradcatalog.ufl.edu/preview_course_nopop.php?catoid=6&coid=91244))

The course overview appearing on the published syllabus for Dr. Okech's course repeatedly emphasizes safe **methods for the control** of diseases. This is fundamentally different from the content and focus of my proposed course.

My proposed course emphasizes **ecology** – how do interactions of the vectors (blood-feeding insects and arachnids) and the disease hosts (mainly wildlife) affect the transmission of vector-borne pathogens. My proposed course does not cover control, except when stating that a firm understanding of ecology is necessary for successful control.

Dr. Okech's consult of my proposed course stated "The proposed new course overlaps significantly in Weeks 1,2,5,7,8,9,10,11,13,14 and 15." Both courses cover malaria, for example (week 15). However, malaria is an enormous topic, and Dr. Okech's course focuses on "global disease burden, vectors (arthropod), public health importance, epidemiology, and current prevention and control approaches" as stated in his consult form. My own lectures on malaria do not focus on these aspects of the disease, but instead focus on how aspects of habitat, and host and vector biology influence pathogen transmission. This is not splitting hairs. These are fundamentally different questions.

There are also fundamental differences in the audiences of Dr. Okech's course and my proposed course, even when covering the same nominal topic. Students attracted to Dr. Okech's course will be interested in learning about methods for monitoring diseases and controlling their transmission. These students typically have a background and focus in public health. Those students would not receive training on monitoring and control in my

course. By the same token, the students attracted to my course typically have a focus in biology, ecology and entomology. The ecological interests that such students have in relation to disease transmission would not be fulfilled in Dr. Okech's course. As such, I feel that the students attracted to Dr. Okech's course and my courses are going to draw from very different pools. In addition, my proposed course is taught entirely online, and is available to distance education students. PHC 6515 is not offered online.

In summary, my proposed course in Entomology and PHC 6515 in Environmental & Global Health do not duplicate the materials. Although some lectures have nominal similarity they do not repeat the same materials, and the students of these respective courses would not be exposed to redundant materials. The students attracted to the two courses would be from different pools and should not compete.

Thank you,

A handwritten signature in black ink, appearing to read "Nathan Burkett-Cadena". The signature is fluid and cursive, with the first name "Nathan" being the most prominent.

Nathan Burkett-Cadena, PhD  
Assistant Professor  
University of Florida/IFAS  
Florida Medical Entomology Laboratory  
Vero Beach, FL 32962  
(772) 778-7200 ext. 141