

Cover Sheet: Request 11797

PHC4XXX The Ménage à trois of Emerging Infectious Diseases

Info

Process	Course New Ugrad/Pro
Status	Pending
Submitter	Vogle,Candice Raquel cvogle@ufl.edu
Created	8/29/2017 9:40:00 AM
Updated	9/21/2017 1:06:32 PM
Description of request	This course is a pivotal elective in the One Health Program and the Bachelors of Public Health degree. It is designed to introduce undergraduate students to the concept of One Health in the context of how disease-causing microbes (or pathogens) emerge and the critical drivers of microbial evolution.

Actions

Step	Status	Group	User	Comment	Updated
Department	Approved	PHHP - Environmental and Global Health 313316000	Rush, Caronne Constance Claire		8/29/2017
Deleted PHC 4XXX The Ménage à trois of Emerging Infectious Diseases.pdf					8/29/2017
College	Recycled	PHHP - College of Public Health and Health Professions	HANSON, STEPHANIE L.	Please clarify make up policy for requirements other than quizzes, which are listed. If you are allowing no make ups other than required by UF attendance policy please state that in your Make Up section.	8/31/2017
No document changes					
Department	Approved	PHHP - Environmental and Global Health 313316000	Rush, Caronne Constance Claire		9/18/2017
No document changes					
College	Approved	PHHP - College of Public Health and Health Professions	HANSON, STEPHANIE L.		9/21/2017
Replaced PHHP-Syllabus Template-2017 v7.docx					9/21/2017
Added PHC 4XXX The Ménage à trois of Emerging Infectious Diseases FINAL.pdf					9/21/2017
University Curriculum Committee	Pending	PV - University Curriculum Committee (UCC)			9/21/2017
No document changes					
Statewide Course Numbering System					

Step	Status	Group	User	Comment	Updated
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					

Course|New for request 11797

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emerge and the critical drivers of microbial evolution.

Submitter: Rush,Caronne Constance Claire crush@phhp.ufl.edu

Created: 9/18/2017 12:15:43 PM

Form version: 2

Responses

Recommended PrefixPHC

Course Level 4

Number XXX

Category of Instruction Advanced

Lab Code None

Course TitleThe Ménage à trois of Emerging Infectious Diseases

Transcript TitleMénage Emer Infec Dis

Degree TypeBaccalaureate

Delivery Method(s)On-Campus

Co-ListingNo

Effective Term Spring

Effective Year2018

Rotating Topic?No

Repeatable Credit?No

Amount of Credit3

S/U Only?No

Contact Type Regularly Scheduled

Weekly Contact Hours 3

Course Description This course is a pivotal elective in the One Health Program and the Bachelors of Public Health degree. It is designed to introduce undergraduate students to the concept of One Health in the context of how disease-causing microbes (or pathogens) emerge and the critical drivers of microbial evolution.

Prerequisites Gen Ed Biology; academic level junior, senior and graduate or instructor approval

Co-requisites N/A

Rationale and Placement in Curriculum As we internationalize the Gator Nation through Learning without Borders, this course underscores the fact that infectious diseases have always been without borders. Thus, these concepts are centered in the sphere of global health. The course will teach students to identify, describe, and explain global changes in animal and human health and the environment and how the interdependence of these changes drives microbial evolution and adaptation to new hosts. Several topics will reinforce domains and cross cutting concepts central to the Bachelors of Public Health curriculum.

Course Objectives 1. Understand the molecular basis of evolution in the microbial world
2. Demonstrate how critical scientific discoveries contributed to our current understanding of these concepts

3. Appreciate the contribution of public health practitioners in surveillance and tracking of infectious disease outbreaks
4. Understand how legal, ethical, economic and regulatory elements of health care and public health policy and the roles, influences and responsibilities of the different agencies and branches of government influence outbreak response
5. Explain the basic concepts of infectious diseases and explain routes of disease transmission
6. Describe the concept of One Health and how it relates to public health as well as its core values, concepts and functions across the globe and in society
7. Cite and explain examples of emerging infectious diseases and re-emerging infectious diseases
8. List the anthropogenic factors that contribute to disease emergence and explain how they contribute to emergence
9. List the diverse environmental factors that contribute to disease emergence and explain how they contribute to emergence

Course Textbook(s) and/or Other Assigned Reading There is no required textbook for this course. Pertinent journal articles and reading materials as they apply to each module will be found on the course website; other journal articles will be available on-line.

Weekly Schedule of Topics 1 01-08-18 Introduction to One Health

- Definitions
- Intersections

2 01-15-18 Fundamentals of Microbiology

- What is a microbe?
- Growth and metabolism
- Detection and measurement
- Sterilization and disinfection
- Antimicrobial therapy

3 01-22-18 Fundamentals of Microbial Evolution/Adaptation

- The bacterial advantage
- Fitness and selection

4 01-29-18 Principles of Infectious Diseases; Emerging Infectious Diseases

- What is disease?
- Classification of microbes
- Who is a host
- Mechanisms of disease transmission
- Detection, diagnosis, and prevention

5 02-05-18 Case studies – The Animal-Human Interface

- Zoonoses
- Reverse zoonoses

6 02-12-18 Case studies – The Animal-Human Interface

- Anthropogenic land use changes
- Altered agricultural practices

7 02-19-18 Case studies – The Human Environment

- Human behavior, practices and beliefs

8 02-26-18 Case studies – The Human Environment

- Human behavior, practices and beliefs

9 03-05-18 Spring Break – no classes

10 03-12-18 Case studies – The Evolving Physical Environment

- International travel
- Global commerce
- Technology

11 03-19-18 Case studies – The Evolving Physical Environment

- Military deployments
- Refugees and internally displaced people

12 03-26-18 Case studies – The Political Environment

- HIV, TB, and Star Wars

13 04-02-18 Case studies – Consequences of Medical Interventions

- Vaccination programs
- Targeted diagnostics

14 04-09-18 Class Presentation – Antibiotic Resistance

15 04-16-18 Class Presentation – Public Health Responses: What works?

16 04-23-18 Class Presentation – One Health Topics in Popular Culture

Links and

Links and Policies

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

<https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>

<http://gradschool.ufl.edu/students/introduction.html>

<https://evaluations.ufl.edu>

<https://evaluations.ufl.edu/results/>

<http://www.dso.ufl.edu>

<http://www.counseling.ufl.edu>

<http://www.umatter.ufl.edu/>

<https://shcc.ufl.edu/>

<http://www.alachuacounty.us/DEPTS/CSS/CRISISCENTER/Pages/CrisisCenter.aspx>

www.multicultural.ufl.edu

Grading Scheme Quizzes (10 quizzes) 20%

Mid-term exam 30%

Paper review and Class Presentation 50%

Instructor(s) Anthony Maurelli

University of Florida
College of Public Health & Health Professions Syllabus
PHC XXX: The M \acute{e} nage \grave{a} trois of Emerging Infectious Diseases (3 credit hours)
Spring semester: 2017-18
Delivery Format: On-Campus
Mondays 9:35-11:30 (2 periods) and Wednesdays 9:35-10:25 (1 period)
E-Learning

Instructor Name: Anthony T. Maurelli, Ph.D.
Room Number: HPNP 4154
Phone Number: 352-295-5029
Email Address: amaurelli@phhp.ufl.edu
Office Hours: Mondays 8:15 – 9:15 AM
Teaching Assistants:
Preferred Course Communications: Email

Prerequisites

General Education Biology; academic level junior, senior or instructor approval

PURPOSE AND OUTCOME

Course Overview

This course is an elective in the Bachelors of Public Health degree. It is designed to introduce undergraduate students to the concept of One Health in the context of how disease-causing microbes (or pathogens) emerge and the critical drivers of microbial evolution. This course will provide students with an understanding of One Health as seen through the global emergence of new infectious disease agents and how factors within the One Health triad (the intersection of animal and human health and the environment) influence evolution and, thus, disease emergence.

Relation to Program Outcomes

As we internationalize the Gator Nation through Learning without Borders, this course underscores the fact that infectious diseases have always been without borders. Thus, these concepts are centered in the sphere of global health. The course will teach students to identify, describe, and explain global changes in animal and human health and the environment and how the interdependence of these changes drives microbial evolution and adaptation to new hosts. Several topics will reinforce domains and cross cutting concepts central to the Bachelors of Public Health curriculum.

Course Objectives and/or Goals

This course is designed to provide students with a basic understanding of infectious diseases, disease transmission, and the concept of One Health. Students will learn how One Health and Public Health are intertwined. They will also learn the fundamentals of molecular genetic basis of evolution. Students will then apply this knowledge to understanding the multiple factors that drive the emergence and re-emergence of infectious diseases. Students will also be introduced to, and will discuss, some of the primary scientific research literature that serves as the foundation for our knowledge of infectious diseases. Taken together, the course is designed to enable students to master a specific content set and to develop critical thinking and communications skills.

Upon successful completion of this course, students should be able to:

Content

1. Explain the molecular basis of evolution in the microbial world
2. Demonstrate how critical scientific discoveries contributed to our current understanding of these concepts
3. Appreciate the contribution of public health practitioners in surveillance and tracking of infectious disease outbreaks (Affective domain)
4. Breakdown how legal, ethical, economic and regulatory elements of health care and public health policy and the roles, influences and responsibilities of the different agencies and branches of government influence outbreak response

Critical Thinking

5. Explain the basic concepts of infectious diseases and explain routes of disease transmission

Communication

6. Describe the concept of One Health and how it relates to public health as well as its core values, concepts and functions across the globe and in society
7. Cite and explain examples of emerging infectious diseases and re-emerging infectious diseases
8. Explain how anthropogenic factors contribute to disease emergence
9. List the diverse environmental factors that contribute to disease emergence and explain how they contribute to emergence

Instructional Methods

This course is offered weekly, in-person. Class meetings will include the following:

- 1.) Assigned readings and videos
- 2.) In-person lectures that meet twice a week
- 3.) Quizzes covering all content presented within the week, including readings and lectures
- 4.) Class discussions and group presentations

DESCRIPTION OF COURSE CONTENT

Topical Outline/Course Schedule

Week	Date(s)	Topic(s)
1	01-08-18	Introduction to One Health <ul style="list-style-type: none"> • Definitions • Intersections
2	01-15-18	Fundamentals of Microbiology <ul style="list-style-type: none"> • What is a microbe? • Growth and metabolism • Detection and measurement • Sterilization and disinfection • Antimicrobial therapy
3	01-22-18	Fundamentals of Microbial Evolution/Adaptation <ul style="list-style-type: none"> • The bacterial advantage • Fitness and selection
4	01-29-18	Principles of Infectious Diseases; Emerging Infectious Diseases <ul style="list-style-type: none"> • What is disease? • Classification of microbes • Who is a host • Mechanisms of disease transmission • Detection, diagnosis, and prevention

Week	Date(s)	Topic(s)
5	02-05-18	Case studies – The Animal-Human Interface <ul style="list-style-type: none"> • Zoonoses • Reverse zoonoses
6	02-12-18	Case studies – The Animal-Human Interface <ul style="list-style-type: none"> • Anthropogenic land use changes • Altered agricultural practices
7	02-19-18	Case studies – The Human Environment <ul style="list-style-type: none"> • Human behavior, practices and beliefs
8	02-26-18	Mid-term exam
9	03-05-18	Spring Break – no classes
10	03-12-18	Case studies – The Evolving Physical Environment <ul style="list-style-type: none"> • International travel • Global commerce • Technology
11	03-19-18	Case studies – The Evolving Physical Environment <ul style="list-style-type: none"> • Military deployments • Refugees and internally displaced people
12	03-26-18	Case studies – The Political Environment <ul style="list-style-type: none"> • HIV, TB, and Star Wars
13	04-02-18	Case studies – Consequences of Medical Interventions <ul style="list-style-type: none"> • Vaccination programs • Targeted diagnostics
14	04-09-18	Class Presentation – Antibiotic Resistance
15	04-16-18	Class Presentation – Public Health Responses: What works?
16	04-23-18	Class Presentation – One Health Topics in Popular Culture

Course Materials and Technology

There is no required textbook for this course. Pertinent journal articles and reading materials as they apply to each module will be found on the course website; other journal articles will be available on-line.

ACADEMIC REQUIREMENTS AND GRADING

Course Components

Syllabus quiz

Reading and attending lectures

Weekly or random classroom quizzes– short assessments designed to test whether students have the basic knowledge, definitions, and concepts related to the previous week's material

Mid-term exam – designed to test students' grasp of key knowledge and principles covered in class and application of such knowledge to problems in One Health and disease emergence

Paper review and Class Presentation – Students will be provided with a choice of primary source papers related to emerging infectious diseases from which they will choose one paper for review. Review of the paper must include:

1. A brief introduction of the topic covered
2. Statement of the "problem" or question that the authors were trying to address
3. A summary of the results
4. Analysis of whether the results support the authors' conclusion(s)
5. Significance of the study's findings

Students will present their review of the paper in class and moderate discussion of the paper for the class.

Grading

Requirement	Due date	% of final grade
Syllabus quiz		0%
Quizzes	Random	(10 quizzes) 20%
Mid-term exam	Week 8	30%
Paper review and Class Presentation	Weeks 14-16	50%

You must include the letter grade to grade point conversion table below. Letter grade to grade point conversions are fixed by UF and cannot be changed.

Letter Grade	A	A-	B+	B	B-	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	1.33	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://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

Policy Related to Make up Exams or Other Work

No make up exams or other work will be offered other than as required by UF attendance policy. Please note: 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 me within 24 hours of the technical difficulty if you wish to request a make-up. For information regarding the UF Attendance Policy see the Registrar website for additional details:

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

Policy Related to Required Class Attendance

Attendance is not mandatory, but absences will negatively affect your grade as material covered exclusively in the classroom will appear on exams. In addition, pop quizzes will be administered in class and no make ups will be offered except as allowed by an excused absence.

All faculty are bound by the UF policy for excused absences. For information regarding the UF Attendance Policy see the Registrar website for additional details:

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

STUDENT EXPECTATIONS, ROLES, AND OPPORTUNITIES FOR INPUT

Expectations Regarding Course Behavior

All individuals in the classroom, including fellow students, instructors, and guests, are to be treated with respect at all times. All electronics are to be turned off upon entering the classroom. Cell phones must be turned to silent or off during class. Ringing and buzzing cell phones detract from a fruitful educational environment. Each student should make every attempt to arrive to, and be prepared for, class on time. The use of laptops is permitted for class work. The class is meant to be interactive so students are encouraged to ask questions of the instructors and any guest lecturers. Side conversations are to be kept to a minimum.

Communication Guidelines

Students who have questions that cannot be answered during class time should use email or office hours as mechanisms for communicating with the instructors or TA. Office hours have been created to accommodate other courses as much as possible however a student may schedule alternate times to meet with the instructors or TA if the set times do not work. Students who cannot meet during office hours should use Canvas or email to contact the instructors or TA. Please be aware that students should allow two business days for a response to inquiries.

Academic Integrity

Students are expected to act in accordance with the University of Florida policy on academic integrity. Students at the University of Florida have committed themselves to uphold the Honor Code which includes the following pledge:

“We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity.”

Students are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit 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.”

It is the individual student’s responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Cheating, lying, misrepresentation, or plagiarism in any form is unacceptable and inexcusable behavior. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. Additional information regarding Academic Integrity, Student Conduct and Honor Code is available at: <https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>
<http://gradschool.ufl.edu/students/introduction.html>

Online Faculty Course Evaluation Process

Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations 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/>.

SUPPORT SERVICES

Accommodations for Students with Disabilities

If you require classroom accommodation because of a disability, you must register with the Dean of Students Office <http://www.dso.ufl.edu> within the first week of class. The Dean of Students Office will provide documentation of accommodations to you, which you then give to me as the instructor of the course to receive accommodations. Please make sure you provide this letter to me by the end of the second week of the course. The College is committed to providing reasonable accommodations to assist students in their coursework.

Counseling and Student Health

Students sometimes experience stress from academic expectations and/or personal and interpersonal issues that may interfere with their academic performance. If you find yourself facing issues that have the potential to or are already negatively affecting your coursework, you are encouraged to talk with an instructor and/or seek help through University resources available to you.

- The Counseling and Wellness Center 352-392-1575 offers a variety of support services such as psychological assessment and intervention and assistance for math and test anxiety. Visit their web site for more information: <http://www.counseling.ufl.edu>. On line and in person assistance is available.
- You Matter We Care website: <http://www.umatter.ufl.edu/>. If you are feeling overwhelmed or stressed, you can reach out for help through the You Matter We Care website, which is staffed by Dean of Students and Counseling Center personnel.
- 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. 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: <https://shcc.ufl.edu/>
- Crisis intervention is always available 24/7 from:
Alachua County Crisis Center
(352) 264-6789
<http://www.alachuacounty.us/DEPTS/CSS/CRISISCENTER/Pages/CrisisCenter.aspx>

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.

Inclusive Learning Environment

Public health and health professions are based on the belief in human dignity and on respect for the individual. As we share our personal beliefs inside or outside of the classroom, it is always with the understanding that we value and respect diversity of background, experience, and opinion, where every individual feels valued. We believe in, and promote, openness and tolerance of differences in ethnicity and culture, and we respect differing personal, spiritual, religious and political values. We further believe that celebrating such diversity enriches the quality of the educational experiences we provide our students and enhances our own personal and professional relationships. We embrace The University of Florida's Non-Discrimination Policy, which reads, "The University shall actively promote equal opportunity policies and practices conforming to laws against discrimination. The University is committed to non-discrimination with respect to race, creed, color, religion, age, disability, sex, sexual orientation, gender identity and expression, marital status, national origin, political opinions or affiliations, genetic information and veteran status as protected under the Vietnam Era Veterans' Readjustment Assistance Act." If you have questions or concerns about your rights and responsibilities for inclusive learning environment, please see your instructor or refer to the Office of Multicultural & Diversity Affairs website: www.multicultural.ufl.edu