

College of Public Health & Health Professions  
PHC 6370  
**Public Health Biology**  
Spring 2014  
Mondays 9:35-11:30 am, Wednesdays 9:35-10:25  
Room G-316

**Instructor Information**

Instructor: Cindy Prins, PhD, MPH, CIC, CPH

Email: [capfive@phhp.ufl.edu](mailto:capfive@phhp.ufl.edu)

Phone: 352-273-5934

Office: CTRB 4229

Office Hours: By appointment

**Course Overview**

This course will offer an understanding of the biological basis of public health issues. It is intended for students in all concentration areas of the Public Health Program regardless of their backgrounds in the biological sciences. Lectures will include the appropriate background material in biology, chemistry, biochemistry, molecular biology, genetics, and immunology to allow students to understand the biological mechanisms of disease prevention and progression at a molecular level. Specific topics will include diseases and conditions that are most frequently discussed in current public health settings, including infectious diseases, genetic illnesses, cancer, environmental illnesses, and vaccines.

**Course Objectives**

Upon completion of this course, students will be able to:

- \* Describe the molecular pathways that are involved in the progression of specific infectious diseases of public health importance
- \* Explain how environmental stresses and influences can cause disease
- \* Identify the causes and mechanisms of chronic and genetic illnesses
- \* Explain how vaccines stimulate the immune system to prevent infection and the controversies involved in vaccine use
- \* Explain the varied molecular mechanisms that can result in the production of cancer cells

**Course Materials**

There is no required text for this course. The weekly readings will be available free of charge on PubMed and/or will be posted on the course website.

We will read two non-fiction books during the course that you will need to purchase. These are:

1. The Immortal Life of Henrietta Lacks by Rebecca Skloot; ISBN-10: 9781400052189
2. Rising Plague: The Global Threat from Deadly Bacteria and Our Dwindling Arsenal to Fight Them by Brad Spellberg; ISBN-10: 1591027500

## **Course Requirements/Evaluation/Grading**

Quizzes

Exam 1 – 25%

Exam 2 – 25%

Participation/Attendance – 15%

Assignments – 35%

**Exams** - Exams are a combination of multiple choice, short answer, long answer, and fill in the blank. Each exam has a total of 50 points and is worth 25% of your course grade (50% total).

**Participation/Attendance** – You are expected to attend class and to participate in course discussions (ethics and book discussions). Your attendance and participation are worth 15% of your course grade.

**Assignments** – Course assignments will include two book discussion reflection papers, one ethics discussion reflection paper, and 4 journal article reflection papers. Each assignment paper should be one to two pages long (1.5 spacing, one-inch margins, Arial 12 point font) and is worth 5% of your total grade (35% total). Assignments must be submitted on time.

## **Grading**

The grading scale for this course is as follows:

93% - 100% = A (4.00)

90% - 92% = A- (3.67)

87% - 89% = B+ (3.33)

83% - 86% = B (3.00)

80% - 82% = B- (2.67)

77% - 79% = C+ (2.33)

73% - 76% = C (2.00)

70% - 72% = C- (1.67)

67% - 69% = D+ (1.33)

63% - 66% = D (1.00)

60% - 62% = D- (0.67)

Below 60% = E (0.00)

## **Topical Outline**

<b>Date</b>	<b>Topic</b>	<b>Assignment</b>
Monday, January 6	Course Intro, Syllabus, Taxonomy, Cell Biology	None
Wednesday, January 8	DNA Replication	
Monday, January 13	Transcription & Translation, Stem Cells (HHMI Lecture)	
Wednesday, January 15	Genetics & Inherited Illnesses	
Monday, January 20	Dr. Martin Luther King Jr. Day – No Class!	

<b>Date</b>	<b>Topic</b>	<b>Assignment</b>
Wednesday, January 22	Epigenetics	Journal Article Paper 1 due
Monday, January 27	Cancer, HHMI Cancer Genomics	
Wednesday, January 29	Neurological Illnesses	
Monday, February 3	Immunology and Autoimmune Diseases	
Wednesday, February 5	Nutrition and Obesity	Journal Article Paper 2 due
Monday, February 10	Cardiovascular Diseases, Diabetes	
Wednesday, February 12	Assisted Reproduction	
Monday, February 17	Exam 1	
Wednesday, February 19	Microbiology	Book Discussion Reflection Paper Due (2/19/13)
Monday, February 24	First Book Discussion	Book Discussion: The Secret Life of Henrietta Lacks
Wednesday, February 26	Microbiology Continued, Antibiotics and Resistance	
Monday, March 3	Spring Break – No Classes!	
Wednesday, March 5	Spring Break – No Classes!	
Monday, March 10	TB, Virology and Viral Diseases	
Wednesday, March 12	Vaccines	Journal Article Paper 3 due
Monday, March 17	Frontline: The Vaccine War	
Wednesday, March 19	HIV	
Monday, March 24	Video: And the Band Played On	Journal Article Paper 4 due
Wednesday, March 26	Bioterrorism Agents	
Monday, March 31	Molecular Epidemiology	
Wednesday, April 2	Eradication of Smallpox	Book Discussion Reflection Paper Due (4/2/13)
Monday, April 7	Second Book Discussion	Rising Plague by Brad Spellberg
Wednesday, April 9	STI's	
Monday, April 14	Prions, Zoonoses	
Wednesday, April 16	Vector-Borne Diseases	Ethics Discussion Reflection Paper Due (4/16/13)
Monday, April 21	Exam 2	
Wednesday, April 23	Ethics Discussion	

**University's Honesty Policy (cheating and use of copyrighted materials) Academic Integrity – Students are expected to act in accordance with the University of Florida policy on academic integrity (see Student Conduct Code, the Graduate Student Handbook or this web site for more details: [www.dso.ufl.edu/judicial/procedures/academicguide.php](http://www.dso.ufl.edu/judicial/procedures/academicguide.php)).**

Cheating, lying, misrepresentation, or plagiarism in any form is unacceptable and inexcusable behavior.

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

### **Turnitin**

Academic integrity is a serious issue that has been a growing problem at Universities. I have a zero tolerance policy for breaches of academic integrity, including plagiarism and cheating. There are multiple video resources posted on our Sakai site that discuss plagiarism and how to properly quote and cite other people's work. With each assignment and exam you complete you are pledging that you hold yourself and your classmates to the highest standards of academic integrity. I use an online tool called Turnitin to check student work for originality; in other words, your work should be in your own words and not copied from any source. Every student needs to watch the videos on plagiarism and on using Turnitin and needs to check their own Turnitin report, made available through the Sakai site automatically when you submit anything through assignments. You should submit assignments early enough to have time before the due date to make revisions to them if your Turnitin report shows areas of high similarity to online resources. Any student caught cheating or plagiarizing will be reported to the Dean of Students Office and will be subject to academic penalties in the course, at minimum.

### **Class Attendance**

Attendance is required for all class sessions. Exceptions are made per the University's policy, including "illness, serious family emergencies, special curricular requirements (e.g., judging trips, field trips, professional conferences), military obligation, severe weather conditions, religious holidays and participation in official university activities such as music performances, athletic competition or debate. Absences from class for court-imposed legal obligations (e.g., jury duty or subpoena) must be excused. Other reasons also may be approved."

### **Make-up Exams or Other Work**

Make-up exams will only be given in the event of illness that is documented by a physician.

### **Accommodations for Students with Disabilities**

The College and the course instructor are committed to providing reasonable accommodations to assist students' coursework. To obtain academic accommodations, first register with the Dean of Students' Office. The Dean of Students' Office will provide documentation to be given to the course instructor at the time you request the accommodation.

### **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, Visit their web site for more information: <http://www.counseling.ufl.edu/>. They are located on campus at 3190 Radio Road and are open from 8 am to 5 pm Monday through Friday. You can also get emergency walk-in crisis stabilization at the Counseling and Wellness Center's (CERC) on-campus "Crisis and Emergency Response Center" in Peabody Hall.

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.*

### **Classroom Etiquette**

Students are expected to arrive on time to class and remain throughout the scheduled class time. If you need to arrive late or leave early for any reason, please inform the instructor prior to class. The use of cell phones and laptops is prohibited in the classroom unless otherwise specified. You may use your laptop in the classroom but use should be limited to viewing course slides and taking notes. Cheating and plagiarism will not be tolerated and will result in a grade of zero for the assignment.