

**University of Florida**  
**College of Public Health & Health Professions Syllabus**  
**PHC 6370: Public Health Biology (3 credit hours)**  
Semester: Spring 2016  
Mondays 9:35 am to 11:30 am  
Wednesdays 9:35 am to 10:25 am  
Delivery Format: On-Campus; HPNP G-307  
Course Website: E-learning in Canvas

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Instructor Name: Cindy Prins, PhD, MPH, CIC, CPH  
Room Number: CTRB 4229  
Phone Number: 352-273-5934  
Email Address: capfive@ufl.edu  
Office Hours: By Appointment

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**Prerequisites:** Graduate Student in the Public Health program

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## **PURPOSE AND OUTCOME**

### **Course Overview**

This course will offer an explanation 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, chronic diseases, genetic illnesses, cancer, and vaccines.

### **Course Objectives**

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

- \* Recall basic concepts of molecular biology, immunology, and genetics and apply those concepts to conditions that are important to public health
- \* Explain the varied molecular mechanisms that can result in the production of cancer cells
- \* Describe the molecular pathways that are involved in the progression of specific infectious diseases of public health importance
- \* Identify the causes and mechanisms of chronic and genetic illnesses
- \* Explain how vaccines stimulate the immune system to prevent infection and discuss the controversies involved in vaccine use

### **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 one non-fiction book:  
Good Germs, Bad Germs: Health and Survival in a Bacterial World, by Jessica Snyder Sachs  
ISBN Number 0809016427

For technical support for this class, please contact the UF Help Desk at:

- [Learning-support@ufl.edu](mailto:Learning-support@ufl.edu)
- (352) 392-HELP - select option 2
- <https://lss.at.ufl.edu/help.shtml>

## DESCRIPTION OF COURSE CONTENT

### Topical Outline/Course Schedule

Date	Topic	Assignment
Wednesday, January 6	Course Intro, Syllabus, Taxonomy, Cell Biology	
Monday, January 11	DNA Replication, Transcription & Translation, Stem Cells (HHMI Lecture)	
Wednesday, January 13	DNA Replication, Transcription & Translation	
Monday, January 18	Dr. Martin Luther King Jr. Day – No Class	
Wednesday, January 20	Genetics & Inherited Illnesses, Epigenetics	
Monday, January 25	Cancer	
Wednesday, January 27	TBD	Journal Article Paper 1 due
Monday, February 1	Immunology and Autoimmune Diseases	
Wednesday, February 3	Neurological and Mental Illnesses	
Monday, February 8	Cardiovascular Diseases, Diabetes	Journal Article Paper 2 due
Wednesday, February 10	Assisted Reproductive Technology	
Monday, February 15	Exam 1	
Wednesday, February 17	Microbiology	
Monday, February 22	Microbiology Continued, Antibiotics and Resistance	
Wednesday, February 24	First Discussion – The Emperor of All Maladies (Watch on PBS online)	Discussion Reflection Paper Due
Monday, February 29	Spring Break – No Class	
Wednesday, March 2	Spring Break – No Class	
Monday, March 7	Vaccines Frontline: The Vaccine War Virology and Viral Diseases	
Wednesday, March 9	Virology and Viral Diseases (continued)	
Monday, March 14	Infection Control Lecture	
Wednesday, March 16	HIV	Journal Article Paper 3 due
Monday, March 21	Video: And the Band Played On (Class starts at 9 am)	
Wednesday, March 23	No Class Today	
Monday, March 28	Bioterrorism Agents	
Wednesday, March 30	Eradication of Smallpox	Journal Article Paper 4 (due 4/1)
Monday, April 4	TB, STI's	
Wednesday, April 6	Book Discussion – Good Germs, Bad Germs: Health and Survival in a Bacterial World, by Jessica Snyder Sachs	Book Discussion Reflection Paper Due
Monday, April 11	Prions, Zoonoses, Vector-Borne Diseases	
Wednesday, April 13	PHEP Research Day (HPNP Auditorium)	
Monday, April 18	Exam 2	Ethics Discussion Reflection Paper Due
Wednesday, April 20	Ethics Discussion	

## ACADEMIC REQUIREMENTS AND GRADING

### Requirements

Exam 1 – 25%

Exam 2 – 25%

Discussion Participation – 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).

Discussion Participation – You are expected to participate in course discussions (ethics, Nova, and book discussions). Your participation is worth 15% of your course grade.

Assignments – Course assignments will include two discussion reflection papers, one ethics discussion reflection paper, and 4 journal article reflection papers. Each assignment is worth 5% of your total grade (35% total). Assignments must be submitted on time.

Attendance – The attendance policy is stated below. Each unexcused absence will result in a deduction of 1% from your overall course average.

### 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)

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

### Policy Related to Make up Exams or Other Work

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

### Policy Related to Required 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.”

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## STUDENT EXPECTATIONS, ROLES, AND OPPORTUNITIES FOR INPUT

### Expectations Regarding Course Behavior

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 consequences up to and including failure of the course.

### Academic Integrity

Students are expected to act in accordance with the University of Florida policy on academic integrity. As a student at the University of Florida, you have committed yourself 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.”**

You 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 your individual 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. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For additional information regarding Academic Integrity, please see Student Conduct and Honor Code or the Graduate Student Website for additional details:

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

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

Please remember cheating, lying, misrepresentation, or plagiarism in any form is unacceptable and inexcusable behavior.

### 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 Canvas 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 Canvas 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.

### 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.

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