PHC 6009: Biology and Epidemiology of HIV/AIDS (3 credits)

Semester: Summer 2018
Delivery Format: Online
e-Learning in Canvas

Instructor Name:
Robert Cook, MD, MPH
Room Number: CTRB 4232
Phone Number: 352-273-5869
Email Address: cookrl@ufl.edu
Office Hours: I'm happy to have appointments via canvas discussion; skype, phone, or in-person.

Teaching Assistants:
Veronica Richards, MPH, CPH
Email Address: vrichh@ufl.edu
Office Hours:

Preferred Course Communications (e.g. email, office phone): email or scheduled appointment

PREREQUISITES
PHC 6001 – Principles of Epidemiology, or permission of the instructor

PURPOSE AND OUTCOME

Course Overview
The overall goals of this course are: 1) To provide a basic understanding of the biological process by which HIV causes infection and AIDS, including the physiologic processes and cellular process involved in HIV infection and treatment; 2) To promote the development of skills in finding and interpreting current epidemiologic data on HIV/AIDS, including risk factors, comorbid health issues, special populations, and health outcomes; 3) To present an overview of HIV prevention strategies and their effectiveness; 4) To discuss issues specific to the epidemiology of HIV/AIDS in the rural south; 5) to explain ongoing efforts to identify a cure for HIV.

Course Objectives and/or Goals
Upon successful completion of the course, students should be able to:

• Describe the emergence of HIV as a new pathogen, particularly within the US
• Discuss the pathogenesis of HIV and its effect on the immune system
• Identify current treatment strategies for HIV infection and barriers to treatment success
• Identify current behavioral and biomedical strategies to prevent HIV transmission
• Analyze and interpret epidemiologic data related to HIV/AIDS to measure the burden of disease in their respective geographic areas and among populations of interest
• Design epidemiologic studies related to the prevention and treatment of HIV/AIDS overall and within specific groups of persons.
• Explain the role of public health in the prevention and management of HIV in Florida
• Explain the barriers to creating a cure or a vaccine for HIV
• Apply knowledge of legal and ethical issues related to HIV-infected individuals and prevention of infection
How to Succeed in This Course
The summer session is shorter than other semesters but the course content is not shorter so the pace of this course will be fast. It’s critical that you keep up with the schedule—each week expect about 2-3 hours of formal content, and 2-3 hours of homework per week (at minimum). This course is not self-paced so be sure to mark the assignment due dates, quiz dates, and book discussion date in your calendar and participate in them as scheduled. I will try to open up course modules 1-2 weeks in advance so you can work ahead if desired. You are expected to have reliable internet access for this course. If you plan to go out of town then you’ll need to plan ahead to ensure that your assignments are submitted on-time. The final paper in this course is a critical element, so start early, schedule a discussion with the instructor, and follow the guidelines.

DESCRIPTION OF COURSE CONTENT
Topical Outline/Course Schedule

<table>
<thead>
<tr>
<th>Week</th>
<th>Date(s)</th>
<th>Topic(s)</th>
<th>Requirements</th>
<th>Due date</th>
<th>Points*</th>
</tr>
</thead>
</table>
| 1    | 5/14 – 5/20 | Intro and History | • Syllabus Quiz  
• Introductions  
• Reflection Paper | 5/21 | 15  
15 |
| 2    | 5/21 – 5/27 | Study designs and HIV  
HIV/AIDS surveillance | • Study Design Paper  
• State Surveillance Report | 5/29 | 15  
15 |
| 3    | 5/28 – 6/3 | Virology basics and intro to biology of HIV  
HIV and the immune system | • Research Paper Question - Draft  
• Homework | 6/4 | 10  
15 |
| 4    | 6/4 – 6/10 | HIV Care continuum: Care engagement and treatment | • Peer evaluation of research paper question drafts  
• Homework | 6/11 | 10  
15 |
| 5    | 6/11 – 6/17 | No Lecture | • Research Paper Question - Final  
• Quiz #1 | 6/18 | 10  
50 |
Behavioral prevention strategies | • Outline of Research Paper and Design  
• Homework  
• Interventions Discussion | 7/2 | 20  
15  
15 |
| 7    | 6/25 – 7/1 | Summer Break | | | |
| 8    | 7/2 – 7/8 | HIV testing  
HIV and aging | • Homework | 7/9 | 15 |
| 9    | 7/9 – 7/15 | No Lecture | • Rough Draft of Paper  
• Book Discussion Writing Assignment  
• Quiz #2 | 7/16 | 25  
25  
50 |
| 10   | 7/16 – 7/22 | HIV in the rural south  
Book Discussion | • Peer evaluation of rough drafts  
• Book Discussion | 7/23 | 25  
TBA  
25 |
<p>| 11   | 7/23 – 7/29 | Infections associated with HIV/AIDS | • Homework | 7/30 | 15 |</p>
<table>
<thead>
<tr>
<th>Week</th>
<th>Date(s)</th>
<th>Topic(s)</th>
<th>Requirements</th>
<th>Due date</th>
<th>Points*</th>
</tr>
</thead>
</table>
| 12   | 7/30 – 8/5   | • Substance abuse and HIV  
• Worldwide epidemiology of HIV/AIDS | • Final Paper due  
• Infections discussion board                                                 | 8/3      | 100     |
| 13   | 8/6 – 8/10   | • The AIDS-free generation  
• HIV cure  
• Current NIH funding priorities | • World Country Profile  
• Quiz #3                                                                     | 8/10     | 100     |

There are 600 total points. 15 points is 2.5% of your grade, 50 points is 8.33% of your grade

**Course Materials and Technology**

**Text:** The required book for the book discussion is *My Own Country*, by Abraham Verghese,

Additional Readings: Required course readings will be drawn from multiple open-access sources and posted on the course website. To participate in the online book discussion, you should have headphones with a microphone and a high-speed internet connection.

**Technical Support**

For technical support for the materials posted in the course e-Learning site, activities, and assessments, please post in the appropriate discussion or contact:

Name: Truly Hardemon, MEd  
Phone Number: 352-273-5822  
Email Address: hardemont@phhp.ufl.edu

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

Phone Number: (352) 392-HELP (4357) Option 2  
Email: helpdesk@ufl.edu  
Webpage with Chat: UF Computing Help Desk

**ACADEMIC REQUIREMENTS AND GRADING**

**Assignments**

**Quizzes**

There will be three online quizzes during the semester to assess overall understanding of the material presented during lectures. The quizzes will be open book/open note, with a mixed format of short answer, long answer, and multiple choice. However, the quizzes will be timed and you will be limited to 45 minutes once you start the quiz. Each quiz is worth 8.33% of the course grade. You are supposed to do the quiz independently, and without help or input from others. Quiz questions will, for the most part, be based on the individual learning objectives for each class.

**Course Homework and Discussions**

There will be several homework assignments during the semester, most of which are worth 15 points (2.5% of the course grade). Instructions for completing homework assignments can be found on the Canvas site.

**Book Discussion**

All students will read *My Own Country*, by Abraham Verghese, (ISBN 0-679-75292-7) for the book discussion during week 10 of the course. Write and answer three book discussion questions that we will use during our group discussion. You will participate in a live book discussion during the week of July 16 to
July 22. The book discussion questions are worth 25 points of your grade and your participation in and contribution toward the book discussion is worth 25 points (total book discussion is 8.33% of grade).

**Final Project**

Students will design an original epidemiologic study related to HIV/AIDS prevention, transmission, treatment, behavior, policy, or other topics as approved by the instructor. This project is intended to be somewhat like a grant application in which you identify a problem (or gap in our knowledge) and propose a research study to answer the question. As part of this requirement, students will submit a Research Paper Question draft (10 points) and two Peer Evaluations of each other’s question drafts (10 points), the Research Paper Question - Final (10 points) an Outline of Study Design and Key Measures (20 points), a Rough Draft (25 points) and two Peer Evaluations of each other’s designs and rough drafts (25 points). The Final Project (100 points) will be the write-up of the study proposal, including one to two research questions, a brief literature review relevant to the proposed study, and a description of the proposed study. The write-up should be 8 to 10 pages, double-spaced, and is due on August 3. More details will be provided in the Canvas course site and in brief video clips provided by the instructor. As you can see this project paper is worth 200 points (33% of the grade!). You are encouraged to schedule times to speak with Dr. Cook about your project before you submit your Paper outline and again before the final paper.

The specific weekly topics for this course, and weekly graded assignments are summarized in the table on the next page.

**Grading:** Each assignment contributes somewhat to the overall course grade. The final paper is a large chunk of the grade so it is important to not fall behind on that assignment. If you miss an assignment due date, you will be assigned a zero. Please discuss with the instructor ASAP about possible make-up options, which can be considered in some circumstances but not always. Although an assignment worth 2.5% of your grade does not seem like much, if you miss more than 3-4 of these it will be nearly impossible to obtain an A.

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Due date</th>
<th>Points or % of final grade (% must sum to 100%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quizzes</td>
<td></td>
<td>150 points, 25%</td>
</tr>
<tr>
<td>Homework and Discussions</td>
<td></td>
<td>200 points, 33.33%</td>
</tr>
<tr>
<td>Book Discussion</td>
<td></td>
<td>50 points, 8.33%</td>
</tr>
<tr>
<td>Final Project</td>
<td></td>
<td>200 points, 33.33%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>600 points, 100%</td>
</tr>
</tbody>
</table>

**Point system used (i.e., how do course points translate into letter grades).**

<table>
<thead>
<tr>
<th>Points earned</th>
<th>Letter Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>93% - 100%</td>
<td>A</td>
</tr>
<tr>
<td>90% - 92%</td>
<td>A-</td>
</tr>
<tr>
<td>87% - 89%</td>
<td>B+</td>
</tr>
<tr>
<td>83% - 86%</td>
<td>B</td>
</tr>
<tr>
<td>80% - 82%</td>
<td>B-</td>
</tr>
<tr>
<td>77% - 79%</td>
<td>C+</td>
</tr>
<tr>
<td>73% - 76%</td>
<td>C</td>
</tr>
<tr>
<td>70% - 72%</td>
<td>C-</td>
</tr>
<tr>
<td>67% - 69%</td>
<td>D+</td>
</tr>
<tr>
<td>63% - 66%</td>
<td>D</td>
</tr>
<tr>
<td>60% - 62%</td>
<td>D-</td>
</tr>
<tr>
<td>&lt;60%</td>
<td>E</td>
</tr>
</tbody>
</table>

Please be aware that a C- is not an acceptable grade for graduate students. A grade of C counts toward a graduate degree only if an equal number of credits in courses numbered 5000 or higher have been earned with an A. In addition, the Bachelor of Health Science Program does not use C- grades.

**Letter grade to grade point conversions are fixed by UF and cannot be changed.**

<table>
<thead>
<tr>
<th>Letter Grade</th>
<th>Grade Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4.0</td>
</tr>
<tr>
<td>A-</td>
<td>3.67</td>
</tr>
<tr>
<td>B+</td>
<td>3.33</td>
</tr>
<tr>
<td>B</td>
<td>3.0</td>
</tr>
<tr>
<td>B-</td>
<td>2.67</td>
</tr>
<tr>
<td>C+</td>
<td>2.33</td>
</tr>
<tr>
<td>C</td>
<td>2.0</td>
</tr>
<tr>
<td>C-</td>
<td>1.67</td>
</tr>
<tr>
<td>D+</td>
<td>1.33</td>
</tr>
<tr>
<td>D</td>
<td>1.0</td>
</tr>
<tr>
<td>D-</td>
<td>0.67</td>
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<tr>
<td>E</td>
<td>0.0</td>
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<tr>
<td>WF</td>
<td>0.0</td>
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<tr>
<td>I</td>
<td>0.0</td>
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<tr>
<td>NG</td>
<td>0.0</td>
</tr>
<tr>
<td>S-U</td>
<td>0.0</td>
</tr>
</tbody>
</table>
For greater detail on the meaning of letter grades and university policies related to them, see the Grading and Grade Policies posted by the Registrar’s Office.

Policy Related to Make up Exams or Other Work
Make-up exams or make-ups of assignments will only be given in the event of illness that is documented by a physician.

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 promptly (within one hour) after the technical difficulty if you wish to request a make-up.

Policy Related to Technical Issues
Any requests for make-ups due to technical issues must be accompanied by the ticket number received from the UF Computing Help Desk created 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.

Policy Related to Required Class Attendance
Students are expected to access online lectures before the assignment due date, to prepare for and participate in at least one online discussions in a professional manner, and to complete quizzes and assignments by the due date posted. There are several opportunities for peer discussion and feedback, and usually these are timed to a specific week or assignment. Please be respectful and timely with your responses.

All faculty are bound by the UF policy for excused absences. For greater detail on excused absences, see the Attendance Policies posted by the Registrar’s Office.

STUDENT EXPECTATIONS, ROLES, AND OPPORTUNITIES FOR INPUT

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 Codes information at the Dean of Students Office website or the Academic Expectations information at the Graduate School website for additional details.

Please remember cheating, lying, misrepresentation, or plagiarism in any form is unacceptable and inexcusable behavior.
Online Faculty Course Evaluation Process
Students are expected to provide feedback on the quality of instruction in this course by completing online Faculty Course Evaluations. 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.

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 Disability Resource Center (DRC) within the first week of class. The DRC 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. Online and in person assistance is available.

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 Student Health Care Center website.

Crisis intervention is always available 24/7 from the Alachua County Crisis Center at (352) 264-6789.

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 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.