

AIDS: Science and Society

BICD 136

Summer 2019

Instructor: Cindy Gustafson-Brown (Dr. Gus)
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office hours: Wed, 3:30-4:20 PM, Pepper Canyon 109 (*starting Wed, Aug 14*)

Please present your questions about course material in person during office hours, not by email. I cannot guarantee an answer to your email, unless it is an urgent issue.

Course description

Introduction for biology majors to the AIDS epidemic: epidemiology, biology, and clinical aspects of HIV infection; HIV testing and therapy; and the personal, social, economic and legal impacts of AIDS on the individual and society. Recommended: BILD 1 and BILD 2.

Book

BICD 136 AIDS, Science and Society, Preliminary Third Edition
published by Cognella, <https://store.cognella.com/80178-4a-br-001>

You know you have the right book if the solid color on the cover is red, not purple or blue. The 2019 summer reader is NOT the same as previous editions. The readings have been largely replaced with more up-to-date material. A document will be posted on the course web site to compare the current readings with the winter 2019 version (light blue cover), so that you can see what is the same and what is different. There will be three copies of the summer reader on reserve at the library.

Podcast

This course will be podcast. Be aware that sometimes there are technical glitches that may interfere with recording/posting of lectures. This is entirely out of my control.

Discussion sections

Sections will start on Thurs, Aug 8.

Section	Days	Time	Location	IA	Email
A01	Tu/Th	9-9:50 AM	York 3000A	Katrina Myers	k2myers@ucsd.edu
A02	Tu/Th	10-10:50 AM	York 3000A	Katrina Myers	k2myers@ucsd.edu
A03	Tu/Th	11-11:50 AM	York 3000A	Joseph Newhide	jnewhide@ucsd.edu

In section you will review the lecture material and/or discuss the readings. 4.5% of your grade will be based upon participation in sections. There will also be quizzes (20-25 minutes each, depending on the material covered) in section, as scheduled below.

YOU MAY ONLY TAKE QUIZZES IN THE SECTION IN WHICH YOU ARE ENROLLED.
You may NOT take a quiz in another section.

Formats for discussion sections

Week	Date	Quiz and pages covered	Points
Week 1	Aug 6	no section	
	Aug 8	quiz 1 on pgs 2-49, 86-101	21 pts
Week 2	Aug 13		
	Aug 15	quiz 2 on pgs 54-66, 75-84, 104-167, 179-189	33 pts
Week 3	Aug 20		
	Aug 22	quiz 3 on HIV structure	45 pts
Week 4	Aug 27	quiz 4 on HIV life cycle	45 pts
	Aug 29	quiz 5 on pgs 220-229, 234-240, 256-269, 274-291, 301-306, 318-350, 355-358	35 pts
Week 5	Sept 3		
	Sept 5	quiz 6 on reading: 292, 295-300, 360-427, 433-465	35 pts

IA office hours

You may attend the office hours of any IA.

Name	Day	Time	Location
Joseph Newhide	Tues	12-1 PM	Biomedical library room 201
Katrina Myers	Thurs	12-1 PM	Art of Espresso (Mandeville coffee)

Films

There is a “Films” page on the course web site, with outside links to some of the films which can be accessed directly through the internet. There is also a link to UCSD library digital reserves, where you will find additional films.

In order to access UCSD digital reserves, you must be within the UCSD protected network or use a VPN. There is a link on the “Films” page of the class web site with instructions for setting up a VPN.

How to study the films: The midterm and final exam will test you on material from the films. You should take notes when you watch them, and review your notes before the exams. Do NOT worry about exact dates, numbers or statistics in the films. Instead, focus on the stories, history (major events and general time frame), prominent persons, policy issues, causes of the spread of the epidemic, impact of the epidemic, responses to the epidemic, etc. For each part, or chapter, of the story you should be able to say something intelligent about what the message was. What did the film maker want to communicate; what did they want you to get out of the film? There are old exams posted, on which you can see examples of film/reading questions from previous quarters.

Do NOT wait to the last minute to watch the films, in case there is a technical glitch!

Required films:

1. ***A Closer Walk*** (2003) 80 min (shown in lecture Thurs, Aug 8)
Profiles the impact of the AIDS epidemic in many countries.
available through UCSD library digital reserves
 2. ***The Age of AIDS*** (2006) 4 hours
History of the epidemic, in the U.S. and abroad.
available through UCSD digital reserves
also online here: www.pbs.org/wgbh/pages/frontline/aids/
 3. ***Endgame – AIDS in Black America*** (2012) 2 hours
Describes the impact of HIV/AIDS on African-Americans.
access this film directly through the PBS link
<http://www.pbs.org/wgbh/pages/frontline/endgame-aids-in-black-america/>
 4. ***The End of AIDS*** (2016) 60 min
A series of six segments on HIV prevention and treatment around the world.
access this film directly through the PBS link
<http://www.pbs.org/newshour/features/end-of-aids/>
- } covered on the midterm
- } covered on the final exam

Optional films

5. ***Dealing with the Demon, part 3*** (1997) 50 min
Preventing the spread of HIV among IV drug users.
6. ***AIDS in Africa*** (2000) 55 min
Describes the impact of the AIDS epidemic in Zimbabwe.
7. ***And the Band Played On*** (1993) 140 min
Dramatic depiction of early history of the AIDS epidemic.
<https://vimeo.com/85778803>
8. ***A Time of AIDS*** (1992)
Part 1: The Zero Factor 1 hour
Early AIDS epidemiology, as the CDC tried to discern the nature of this new disease
Part 2: The Hunt for the Virus 1 hour
Follows the scientific detective story to discover the virus that causes AIDS
9. ***A.B.C. Africa*** (2005) (140 minutes)
Documents the plight of AIDS orphans in Africa.
10. ***State of Denial*** (2003) 80 min
The grass-roots struggle in South Africa for access to ARV's
11. ***Blood of Yingzhou District*** (2006) 40 min
Documentary on the AIDS epidemic in rural China
12. ***The Lazarus Effect*** (2010) 32 min
The positive impact of free antiretroviral therapy on HIV/AIDS patients in Africa
http://www.youtube.com/watch?v=l16YH6xCN4c&playnext_from=TL&videos=9MDIVW_aMB7g&feature=featured
13. ***BALKA: Women, HIV, and Drug Use in Ukraine*** (2011) 36 min
<https://www.opensocietyfoundations.org/publications/balka-women-hiv-and-drug-use-ukraine>

Exams

Exams and quizzes will be closed-notes/closed-book, primarily short answer with a few true/false, multiple choice, and short essay questions. You will be accountable for **all material covered in lecture, PowerPoint slides, handouts, and all required reading**.

There will be exam questions pertaining to the **required films**. There will not be exam questions about presentations by HIV-positive guest speakers.

The final exam will be comprehensive for the **lecture** material, with emphasis on the last part of the course. The final exam will not cover readings/films from before the midterm.

BRING STUDENT ID. It will be checked at the exam.

You must write in nonerasable pen and avoid using white-out on the midterm in order to be considered for a regrade. Your handwriting must be legible; we will disregard answers which cannot be deciphered.

Old exams are posted on the course web site. **Review sheets** will be posted on the web site shortly before each exam, and the IAs will conduct **review sessions** before each exam:

1 st review session	Mon, Aug 19, 7-8:30	PCYNH 120
2 nd review session	Thurs, Sept 5, 7-9 PM	PCYNH 120

Missed exams

There are NO alternate exams. Make sure your class schedule has NO exam conflicts, including the final exam! Further, all students must take their reading quizzes in the section in which they are enrolled, unless receiving prior authorization from Dr. Gus.

If you know in advance that you must miss an exam or quiz due to an unavoidable situation (e.g. surgery), it is your responsibility to clear it with Dr. Gus *as soon as the conflict becomes apparent*. If a spontaneous emergency (e.g. serious illness or accident) arises, you **must contact the instructor within 24 hours** of the missed exam to determine if you are eligible for a make-up exam. You will be required to provide documentation, without which there will not be a make-up. Do not ask to reschedule an exam or quiz for any reason other than a *dire emergency*. Make-up exams/quizzes are decided case-by-case. The format *may* be an oral or essay exam.

Regrades

See regrade policy on TED.

Course grade

This course will be graded on a curve. The class average will be a high B minus. Grades will include pluses and minuses. There are 1000 points possible in the quarter.

1.8%	18 points	Attendance when special speakers come to class (last day)
4.8%	48 points	Participation in sections (6 points each for up to <u>eight</u> sections)
21%	214 points	Quizzes
25%	246 points	Midterm
47%	474 points	Final exam

How can I succeed in BICD 136?

1. **Read** the assigned pages before lecture. You will understand the lectures better and learn more. The lecture will be related to the assigned reading, but will expand on the topic. Nevertheless, you are accountable for all reading. It will be covered on the exams and quizzes.

Keep up with the reading. Pace yourself with the reading schedule. If you bump into material that is too technically challenging, *don't get bogged down*. Skip it (temporarily). Return to the most difficult material later.

2. **Outline** the important points as you read. This will help you remember the flow of information and contextualize the details. You will not remember all the reading unless you take notes. Use index cards, or a notebook, to summarize the important points.
3. **Look up words** you don't understand in the glossary, a dictionary, or online.
4. **Come** to class and sit toward the front.
5. **Listen** to the podcast.
6. **Review** your notes within 24 hours of the lecture.
Even more effective: rewrite (outline) your notes within 24 hour of the lecture.
There will be material presented in lecture that is not in the textbook. You are accountable for all lecture material.
7. **Review** the PowerPoint slides with your lecture notes. PowerPoint slides will NOT contain the instructor's notes. They will contain announcements, illustrations, graphs, diagrams, and photos which augment the lecture. They will be posted after each lecture. You are accountable for everything in the PowerPoint slides.
8. **Study** a little bit every day, or a few times per week. Repetition over time is the key to retaining information. Your goal is to establish new neural pathways in your memory and fire them often! Cramming does not accomplish this.
9. **Study** with other students, and choose those who are serious about academics. Make up questions and quiz each other. Anticipate potential exam questions. This is a strategy that has been demonstrated to increase student learning.
10. **Take notes** during the films. If you have time, you may watch a film twice!
11. **Go** to your discussion section. The quizzes there are worth 21% of your grade. Participation is worth 4.8%. Further, there will be opportunities to review the material and ask questions.
12. **Go** to the office hours of the IAs and the instructor. This will encourage you to review the material, in order to have questions to discuss.
13. **Go** to the review sessions.
14. Utilize **study aids** provided on the course web site.
15. If you are having personal difficulties, do not hesitate to seek help at Counseling and Psychological Services (which is free to students). They can help you get over many types of hurdles. <http://caps.ucsd.edu/>
Their self-help library of resources covers many relevant topics, and can be accessed at <http://caps.ucsd.edu/selfhelp.html>

Academic integrity

Students are expected to do their own work, as outlined in the UCSD Policy on Academic Integrity. Cheating will not be tolerated, and I may fail any student caught engaging in academic dishonesty. All exams/quizzes will be closed-book and closed-notes, so all personal materials must be stowed under your seat. Only exams/quizzes written in nonerasable pen will be considered for regrades. Exams will be photocopied for comparison with submitted regrades. Because all exams/quizzes are required for satisfactory completion of this course, any student caught cheating on an exam/quiz may receive a failing grade for the course. He/she may also be suspended from UCSD.

Students with disabilities (from their website)

Students requesting accommodations for this course due to a disability must provide a current Authorization for Accommodation (AFA) letter issued by the Office for Students with Disabilities (OSD) which is located in University Center 202 behind Center Hall. Students are required to present their AFA letters to Faculty (please make arrangements to contact the instructor privately) and to the OSD Liaison in the department in advance so that accommodations may be arranged. Contact the OSD for further information: 858.534.4382 (phone)

osd@ucsd.edu (email)

<http://disabilities.ucsd.edu> (website)

Tentative lecture schedule

Date	Session	Topics	Reading schedule	pages
Mon, Aug 5	1	Introduction; Why does AIDS matter?	2-18	16
Tues, Aug 6	2	Start Global impact	19-39	20
Wed, Aug 7	3	Finish Global impact; Start statistical overview of AIDS epidemic	41-49, 86-101	24
Thur, Aug 8	4	film: <i>A Closer Walk</i>	104-124	20
Mon, Aug 12	5	Finish statistical overview	126-136, 54-66	20
Tues, Aug 13	6	Modern history of HIV epidemic	75-84, 138-154	24
Wed, Aug 14	7	Origin of HIV	156-167, 179-189	21
Thur, Aug 15	8	Finish origin; Does HIV cause AIDS?	190-215	23
Mon, Aug 19	9	Finish HIV causes AIDS; Start immunology	216-229	13
Tues, Aug 20	10	MIDTERM		
Wed, Aug 21	11	Finish immunology; start Biology of HIV	234-254	20
Thurs, Aug 22	12	Biology of HIV	256-269	12
Mon, Aug 26	13	Finish Biology of HIV; Start HIV testing	274-287	14
Tues, Aug 27	14	Finish HIV testing; Start HIV transmission	288-291 ¹ , 301-306, 318-333	24
Wed, Aug 28	15	HIV transmission/Prevention	334-350, 355-358	21
Thur, Aug 29	16	Finish HIV transmission/Prevention; Start AIDS disease process	360-381	19
Mon, Sept 2	17	Finish AIDS disease process	382-404	23
Tues, Sept 3	18	HIV vaccines and therapies	figure on pg 292, 295-300 ² , 406-427	25
Wed, Sept 4	19	HIV therapies	433-465 ³	26
Thur, Sept 5	20	Guest speakers – people with HIV		
Fri, Sept 6	--	FINAL EXAM (3-6 PM)		

This reading schedule will ensure you finish all the readings in a timely manner. Readings are not perfectly correlated with lecture topics. All assigned reading will be covered on section quizzes and on the exams, even if the material is not reiterated in lecture.

On average, there are **73 pages** of reading per week during the summer session. Plan ahead and pace yourself.

¹through the section “**HIV Transmission**”

²starting from the section “**Antiretroviral Therapy**”

³You do NOT have to learn the different types of CD4⁺ T cells on page 450. You should know that there are different types, and they vary in their roles as viral reservoirs. Focus on the broader issues.

How to study the statistics

When reading material dense with numbers (e.g. statistics), do NOT focus on memorizing the numbers! You will be hopelessly bogged down. Instead, focus on the trends. Think about what the numbers are telling you about what is happening in the world. What do they MEAN? How would you summarize what is happening? What is the “take-home message?”

Numbers given in lecture will be the most current data and will supersede numbers in the reading in any case of a conflict. (Published material is always out of date by the time it goes to the printer!)

Numbers you must **actually know (memorize)**:

1. Number of persons currently HIV infected in U.S.
2. Number of new infections per year in U.S.
3. Number of persons currently HIV infected worldwide
4. Cumulative number of infections worldwide since the beginning

While you do not have to memorize the following data, you should have a **sense of proportion**, so that you can recognize whether an approximation is in the ballpark:

1. HIV prevalence
 - in the U.S.
 - in SS Africa
 - in the world's most affected countries
 - in the world overall
2. proportion of HIV infections in women vs. men
 - in the U.S.
 - in SS Africa
 - globally
3. proportion of global HIV infections that are in Africa

As for the *other* numbers, you do not have to memorize them; however, you should understand the trends, and relative significance of the epidemic in different groups.

Know the location in the U.S. with highest incidence.

Globally, know the locations with the highest

- prevalence
- total number of infections
- incidence of HIV/AIDS

You do not have to remember the exact percentage break-downs, but if I give you pie charts to label, you should be able to figure out which groups go into which slices. You can see these types of questions on old exams.