

AIDS: Science and Society

BICD 136

Summer 2018

Instructor

Cindy Gustafson-Brown (Dr. Gus)
Office: Humanities and Social Sciences 1145E
Phone: 534-4242
email: cgb@ucsd.edu (Put **BICD 136** in the subject line!)
office hours: Wednesdays 3:30-4:20, WLH 2113 (no office hours during week 1)

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 Reader, ©2018
published by Cognella Custom, <https://store.cognella.com/18097>

Unfortunately, library reserves will not stock readers that are only used for one quarter. ☹

Podcast

This course will be podcast.

Web site

The class web site will be on TED.

IA office hours *You may attend the office hours of any IA for this class.*

Name:	Day:	Time:	Location:
Emily Yan	Mon	3:30-4:30	Price Center Theater
Kathryn Tsai	Thurs	3:30-4:20	Muir biology bldg 5125
Nicole Kharoufa	Tues	4:30-5:30	Price Center Theater lobby

Discussion sections

Sections will start on Thurs, Aug 10.

section	days	time	room	IA	email
A01	Tue/Thu	12-12:50	HSS 2321	Kathryn Tsai	cht015@ucsd.edu
A02	Tue/Thu	1-1:50	HSS 2321	Nicole Kharoufa	nicole.kharoufa@gmail.com
A03	Tue/Thu	9-9:50	CENTR 218	Emily Yan	e6yan@ucsd.edu
A04	Tue/Thu	10-10:50	CENTR 218	Emily Yan	e6yan@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 minutes each) in section, as scheduled below.

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

Tues, Aug 7	no section	
Thurs, Aug 9	quiz 1 on reading: 1-15, 17-51, 60-78	(31 pts)
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Tues, Aug 14		
Thurs, Aug 16	quiz 2 on reading: 79-91, 97-123, 128-147	(31pts)
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Tues, Aug 21		
Thurs, Aug 23	quiz 3 on HIV structure	(45 pts)
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Tues, Aug 28	quiz 4 on HIV life cycle	(45 pts)
Thurs, Aug 30	quiz 5 on reading: 198-233, 239-241, 246-266, 271-285	(31pts)
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Tues, Sept 4		
Thurs, Sept 6	quiz 6 on reading: 234-239, 286-350	(31pts)

Films

There is a “Films” page on the course web site, with outside links to some of the films. There is also a link to the UCSD library reserves. Several films will be available for viewing through the UCSD library digital reserves. Others can be accessed directly through the internet.

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.

Required films:

1. *A Closer Walk* (2003) 80 min (shown in lecture Thurs, Aug 9)
Profiles the impact of the AIDS epidemic in many countries.
 2. *The Age of AIDS* (2006) 4 hours
History of the epidemic, in the U.S. and abroad.
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.
<http://www.pbs.org/wgbh/pages/frontline/endgame-aids-in-black-america/>
(This film is **not** available through UCSD library. Access PBS directly.)
 4. *Dealing with the Demon, part 3* (1997) 50 min
Preventing the spread of HIV among IV drug users.
 5. *The End of AIDS* (2016) 60 min
A series of six segments on HIV prevention and treatment around the world.
<http://www.pbs.org/newshour/features/end-of-aids/>
(This film is **not** available through UCSD library. Access PBS directly.)
- } covered on the midterm
- } covered on the final exam

Optional films, available either through UCSD digital reserves, or online elsewhere:

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=9MDIVWAMB7g&feature=featured

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 a **review session** before each exam:

1 st review session	Sun, Aug 19, 7-8:20, CENTR 105
2 nd review session	Thurs, Sept 6, 7-8:50 PM, CENTR 105

Graded midterms will be available in the hallway of HSS 1145 (if you sign the waiver). Note that the external doors are locked after business hours. Graded final exams may be viewed by appointment with Dr. Gus, but may not be taken home.

Missed exam or quiz

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 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, and you will receive a zero for that exam/quiz. 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.

Course grade

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

1%	10 points	Quiz on syllabus & regrade policy (due Mon, Aug 6, 11:59 PM)
1.7%	17 points	Attendance when special speakers come to class (last day)
4.5%	45 points	Participation in sections
21%	214 points	Quizzes
24%	242 points	Midterm
47%	472 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 24% of your grade. 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)

Lecture/reading schedule on next page →

Tentative lecture schedule

Date	Session	Topics	Required reading	pages
Mon, Aug 6	1	Introduction; Why does AIDS matter?	1-15, 17-19	17
Tues, Aug 7	2	Global impact	20-38, 68-78	26
Wed, Aug 8	3	Statistical overview of AIDS epidemic	39-43, 48-51, 60-67	18
Thurs, Aug 9	4	film: <i>A Closer Walk</i>	79-91, 97-105	22
Mon, Aug 13	5	Modern history of the AIDS epidemic	106-116	9
Tues, Aug 14	6	Epidemiology, Origin of HIV	117-123 ¹ , 128-132	12
Wed, Aug 15	7	Origin of HIV	135-147	13
Thurs, Aug 16	8	Does HIV cause AIDS?	148-165	17
Mon, Aug 20	9	MIDTERM		
Tues, Aug 21	10	The Immune System	166-179	12
Wed, Aug 22	11	Biology of HIV	180-193	14
Thurs, Aug 23	12	Biology of HIV	194-197	4
Mon, Aug 27	13	HIV testing	198-209	11
Tues, Aug 28	14	HIV transmission/Prevention	210-233 ² , 239-241 ³ , 246-252	30
Wed, Aug 29	15	HIV transmission/Prevention AIDS disease process	253-266, 271-285	28
Thurs, Aug 30	16	AIDS disease process	286-313	28
Tues, Sept 4	17	HIV therapies	figure on pg 234, 235-239 ⁴ , 314-333	24
Wed, Sept 5	18	HIV therapies	334-350 ⁵	17
Thurs, Sept 6	19	Guest speakers	354-356	3
Fri, Sept 7	--	FINAL EXAM (3-6 PM)		

This is a suggested reading schedule to help you stay on track with the lecture topics and finish all the readings in a timely manner. All assigned reading will be covered on section quizzes and on the exams, even if it is not reiterated in lecture.

On average, there are **61 pages** of reading per week during summer session. Plan ahead and pace yourself.

¹through the section “**Time of origin of HIV-1 group M subtypes and recombinants**”

²through the section “**HIV Transmission**”

³starting at “**Prevention**”

⁴from “**Antiretroviral Therapy**” through “**Latency, reservoirs, and potential cure**”

⁵You do NOT have to learn the different types of CD4+ T cells. You should know that there are different types, and they vary in their roles as viral reservoirs. Focus on the big points.

How to study the statistics

When reading material dense with numbers (e.g. statistics), do NOT focus on learning 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**:

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.
2. HIV prevalence
 - in SS Africa,
 - in the world's most affected countries
 - in the world
3. proportion of HIV infections in women vs. men
 - in the U.S.
 - globally
4. 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.

Know where the highest prevalence, total number of infections, and incidence of AIDS are in the world.

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.