

# Virology

**BIMM 114**

**Spring 2012**

**Instructor:** Cindy Gustafson-Brown (Dr. Gus)  
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email: [cgb@ucsd.edu](mailto:cgb@ucsd.edu) (Put **BIMM 114** in the subject line!)  
office hours: Thurs, 2-3 PM

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.

**AS Lecture Notes:** are not be reviewed by the instructor. Use at your own risk.

**Sections:** There will be 9 sections per week, discussing a paper which complements the lectures or viewing a film. There will also be five 10-minute quizzes in sections, dates to be announced. *There will be no sections or TA office hours until Mon, April 9.*

A01	Mon	4-5 PM	HSS 2321	Wilson Kwan	<a href="mailto:ohmrwilson13@gmail.com">ohmrwilson13@gmail.com</a>
A02	Mon	5-6 PM	HSS 2321	Wilson Kwan	<a href="mailto:ohmrwilson13@gmail.com">ohmrwilson13@gmail.com</a>
A03	Mon	6-7 PM	HSS 2321	Thomas Stark	<a href="mailto:tstark@ucsd.edu">tstark@ucsd.edu</a>
A04	Mon	7-8 PM	HSS 2321	Thomas Stark	<a href="mailto:tstark@ucsd.edu">tstark@ucsd.edu</a>
A05	Mon	8-9 PM	HSS 2321	Edison Tse	<a href="mailto:etse@ucsd.edu">etse@ucsd.edu</a>
A06	Fri	9-10 AM	Center 217A	Shigeki Miyake-Stoner	<a href="mailto:smiyakes@ucsd.edu">smiyakes@ucsd.edu</a>
A07	Fri	2-3 PM	HSS 1315	Charles Hesser	<a href="mailto:chesser@ucsd.edu">chesser@ucsd.edu</a>
A08	Fri	11 – 12 PM	Center 203	Shigeki Miyake-Stoner	<a href="mailto:smiyakes@ucsd.edu">smiyakes@ucsd.edu</a>
A09	Fri	3-4 PM	HSS 2321	Charles Hesser	<a href="mailto:chesser@ucsd.edu">chesser@ucsd.edu</a>

You must enroll in a section. You may only take your quiz in the section in which you are enrolled. Enrollment in sections will open at 8 PM on Thurs, April 5, at [sections.ucsd.edu](http://sections.ucsd.edu).

**Clickers:** Register your clicker on TED! Go to “tools.” There you will see “Register Your i>clicker Remote ID.”

**Films:** All films shown in lecture or in section will be available for viewing online, streaming from the library. See the “Films” page on the course web site for links. You *must* access the films from a UCSD computer or use a VPN if you are off campus. If you are prompted for a username, then you are off campus and are not using a VPN. If you have problems click on the links for help.

Films are also available for viewing at the Arts Library in the basement of Geisel Library. However, they are not available in the library *the days they are shown in section*.

## Films

### 1. Rx for Survival (2005) FVLV 2680-2

Examines the most critical health threats facing the world today by portraying conditions in over twenty countries, examining why diseases that are curable still persist, the efforts to treat them, and the dangers of new "superbugs." (55 minutes/episode)

vol 1: disc 1    **episode 1. Disease warriors**    *shown in lecture April 19  
covered on first midterm*

vol 2: disc 3    **episode 6. How safe are we?**    *watch online  
covered on final exam*

web site [www.pbs.org/wgbh/rxforsurvival/](http://www.pbs.org/wgbh/rxforsurvival/)

episode descriptions [www.pbs.org/wgbh/rxforsurvival/series/about/episodes.html](http://www.pbs.org/wgbh/rxforsurvival/series/about/episodes.html)

### 2. The Great Fever (2006) FVLVDV 4371-1    *shown in section April 23, 27 covered on second midterm*

In June 1900, Major Walter Reed led a medical team to Cuba on a mission to investigate yellow fever. Shortly after Reed and his team arrived they began testing the radical theories of a Cuban doctor, Carlos Finlay, who believed that mosquitoes spread yellow fever. This production documents the heroic efforts of Reed's medical team to verify Finlay's theory. When yellow fever struck New Orleans in 1905, federal public health officials launched an aggressive mosquito eradication campaign and successfully ended the epidemic. It was the last yellow fever outbreak in the United States, and the first major public health triumph of the 20th century. (55 minutes)

### 3. H5N1 Killer Flu (2005) FVLV 6393-1    *shown in section May 21, 25 covered on final exam*

Avian influenza A (H5N1) has successfully made the leap from poultry to people. Is a human-to-human pandemic inevitable? Using Southeast Asia as a case study, this Wide Angle report looks at the Vietnamese government's efforts to contain the disease while educating its population. In addition, Bill Moyers speaks with Dr. Anthony Fauci, of the National Institutes of Health, about how this lethal virus mutates and spreads, symptoms of infection, best- and worst-case survival scenarios, the vaccination development process, and whether there will be enough vaccine in the event of a major outbreak. (55 minutes)

web site [www.pbs.org/wnet/wideangle/shows/vietnam/](http://www.pbs.org/wnet/wideangle/shows/vietnam/)

view film online [www.pbs.org/wnet/wideangle/shows/vietnam/video.html](http://www.pbs.org/wnet/wideangle/shows/vietnam/video.html)

## Tentative Class Schedule

Date	Session	Topic	Relevant chapter*
Ap 3	1	Introduction, history	chap 1
Ap 5	2	Structure	chap 2
Ap 10	3	Classification	chap 3
Ap 12	4	Methods	chap 1
Ap 17	5	Start replication cycle	chap 1 & 4
Ap 19	6	Film: <i>Rx for Survival, 1: Disease Warriors</i>	
Ap 24	7	Midterm 1	
Ap 26	8	Finish replication cycle	chap 1 & 4
May 1	9	Bacteriophage T7	Chap 7
May 3	10	Polyomavirus, Papillomavirus	chap 21, 22
May 8	11	Herpesvirus	chap 24
May 10	12	Baculovirus, Poxvirus	chap 26
May 15	13	Picornavirus, Flavivirus	chap 11, 12
May 17	14	Paramyxoviruses & Rhabdoviruses	chap 15
May 22	15	Midterm 2	
May 24	16	Orthomyxovirus	chap 18
May 29	17	Reovirus	chap 19
May 31	18	Retroviruses	chap 28, 29
Jun 5	19	Hepadnavirus , Prions	chap 30, 32
Jun 7	20	Vaccines	chap 35
Jun 11	--	Final Exam (3-6 PM)	

\* Readings in *Fundamentals of Molecular Virology*, Nicholas Acheson (2011)  
There will be copies on reserve at the Biomedical Library.

Chapters 1 – 4 are to be read in their entirety.

We will not cover every page of the other chapters, so more detailed reading assignments will follow.

Additional **required** reading will be posted on the course web site.

**Exams:** The exams will be closed-notes/closed-book, primarily short answer, with a few true/false, multiple choice, and possibly short essay questions. You will be accountable for **all material covered in lecture, films, textbook reading chapters 1-4, other assigned reading in the textbook, papers discussed in section, and “required” articles on the supplemental reading web page.**

Your handwriting must be legible; we will disregard answers which cannot be deciphered. The final exam will be comprehensive, with emphasis on the last third of the course. TA’s will be conducting a **review session** the evening before each midterm, 7-8:30 PM. A review session for the final exam will be held the evening of **Saturday, June 9.**

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

**Missed exams:** If you must miss an exam, you will be required to provide official documentation of an unavoidable emergency (e.g. serious illness, etc.). Without such documentation there will not be a make-up test, and you will receive a failing grade for that exam. Do not ask to reschedule an exam for any reason other than a *dire emergency*. Check your final exam schedule NOW. I will not reschedule your final exam due to multiple exams on one day.

**Regrades:** Only exams written in non-erasable pen will be considered for a regrade, and white-out may not be present on such exams. If an error has been made in the grading of your midterm, you may submit it to Dr. Gus within *three days* of distribution for a regrade. Do not go to a TA for a regrade, although you may want to have one of them explain the answer to you before you come to me. Your midterm or final exam must be submitted with a cover sheet, stapled to the exam, containing a *written* description of the grading error. I will not entertain discussions of such appeals before they are made in writing. I will consider *no more than three* “potential” errors per exam. If I think the TA was too generous grading it, I reserve the right to lower your score. Finally, it is critical that you *read the key* before submitting your regrade. It will be posted on the web site when the graded exams are distributed.

**Course grade:** This course will be graded on a curve. The class mean will be at the B-/C+ boundary.

Clicker participation	3%
Clicker: correct answers	3%
Five quizzes	8 %
Midterm 1	21%
Midterm 2	21%
Final exam	44%

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

## Tips for success in BIMM 114

**Come** to class and sit in the front.

**Review** your notes within 24 hours of the lecture.

Even more effective: rewrite (outline) your notes within 24 hour of the lecture.

**Review** the PowerPoint slides in conjunction with your lecture notes.

**Do the reading** (including the papers). 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. Write notes in your book.

**Outline** the important points as you read. This will help you remember the flow of information and contextualize the details.

**Use a dictionary.**

**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.

**Study** with other students, and choose those who are serious about academics.

**Take notes** during the films. If you miss a film, view it at digital reserves. Watch it twice.

**Go** to your discussion section. If a paper will be discussed, read it *before* going.

**Go** to the office hours of the TA's and the instructor. This will force you to review the material, in order to have questions to discuss.

**Go** to the review sessions.

If you apply these principles, it is nearly impossible to do poorly in this course.

If you are having academic difficulty, OASIS can help. They provide tutoring, as well as classes in study skills and time management. <http://oasis.ucsd.edu/>

If you are having personal difficulties, do not hesitate to seek help at Psychological and Counseling Services (which is free to students). They can help you get over many types of hurdles. [psychservices.ucsd.edu/resources\\_students\\_web/resources\\_students.html](http://psychservices.ucsd.edu/resources_students_web/resources_students.html)

Their self-help library covers many relevant topics, and can be accessed at [psychservices.ucsd.edu/self\\_help\\_library\\_web/self\\_help\\_library\\_home.html](http://psychservices.ucsd.edu/self_help_library_web/self_help_library_home.html)