

Virology

BIMM 114

Winter 2010

Instructor: Cindy Gustafson-Brown (Dr. Gus)
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Phone: 534-4242
email: cgb@ucsd.edu (Put **BIMM 114** in the subject line!)
office hours: Tues, 3:30 until questions are exhausted, York 2300
or by appointment

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: If there are AS Lecture Notes offered for this course, they will not be reviewed by the instructor. Use at your own risk.

Important note about midterms: The midterms in this class are held outside of the regular lecture time. They will be Tues Jan 26 and Tues Feb 23, 6:30-8 PM in Center 119 and 216.

Adding and dropping the class:

This class is still open. You may add the class on a first come, first served basis via WebReg during the first two full weeks of the quarter. If you have any problems, contact Bio Student Affairs, 534-0557.

Last day to add is Friday, Jan 15.
Last day to drop without a “W” is Jan 29.
Last day to drop with a “W” is Mar 5.

Sections: There will be 5 sections per week, discussing a paper which complements the lectures or viewing a film. You may attend any or all sections as you choose each week. *There will be no sections or TA office hours until Mon, Jan 11.*

A02	Tues 5-6 P	Center 220	Elizabeth Clark	elclark@ucsd.edu
A03	Tues 6-7 P	Center 218	Elizabeth Clark	elclark@ucsd.edu
A04	Wed 5-6 P	York 3000A	Charles Hesser	chesser@ucsd.edu
A05	Wed 6-7 P	Center 218	cancelled	
A06	Thur 5-6 P	Center 220	Bryan Bishe	bbishe@ucsd.edu
A07	Thur 6-7 P	Center 220	Bryan Bishe	bbishe@ucsd.edu

Weekly Activities in Sections

week	week of:	reading/film
1	Jan 4	no sections
2	Jan 11	<i>Going to Bat</i> <i>Deadly Contact</i>
3	Jan 18	<i>High Hopes and Dilemmas for a Cervical Cancer Vaccine</i> <i>HPV casts a Wider Shadow</i>
4	Jan 25	Tues 5 PM section – review; Wed/Thurs film: <i>The Great Fever</i>
5	Feb 1	<i>Tumor busting viruses</i>
6	Feb 8	<i>Trailing a Virus</i> (Nipah Virus)
7	Feb 15	<i>Preparing for a Pandemic</i> and a second paper on H1N1 flu, yet to be determined
8	Feb 22	Tues 5 PM section – review; Wed/Thurs film: <i>H5N1 Killer Flu</i>
9	Mar 1	<i>New Hope for Defeating Rotavirus</i>
10	Mar 8	<i>Boosting Vaccine Power</i>

All **papers** can be found on the course web site.

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 proxy or VPN if you are off campus. If you are prompted for a username, then you are off campus and are not using a proxy or 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 *during the week they are shown in section*.

sections Jan 27-28 *The Great Fever*
sections Feb 24-25 *H5N1 Killer Flu*

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 Jan 21
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/

episode descriptions www.pbs.org/wgbh/rxforsurvival/series/about/episodes.html

2. The Great Fever (2006) FVLVDV 4371-1 *shown in section Jan 27 & 28 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 Feb 24 & 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/

view film online www.pbs.org/wnet/wideangle/shows/vietnam/video.html

Tentative Class Schedule

Date	Session	Topic	Reading*
Jan 5	1	Introduction, history	chap 1
Jan 7	2	Structure	chap 2
Jan 12	3	Classification	chap 3
Jan 14	4	Methods	chap 1
Jan 19	5	Start replication cycle	chap 1 & 4
Jan 21	6	Film: <i>Rx for Survival, 1: Disease Warriors</i>	
Jan 26	7	Review session during lecture Midterm 1 at 6:30 PM (Cntr 119 & 216)	
Jan 28	8	Finish replication cycle	chap 1 & 4
Feb 2	9	Bacteriophage T7	Chap 7
Feb 4	10	Parvovirus, Polyomavirus	chap 9, 10
Feb 9	11	Papillomavirus, Adenovirus	chap 11, 12
Feb 11	12	Herpesvirus, Baculovirus	chap 13, 14
Feb 16	13	Poxvirus, Picornavirus	chap 15, 16
Feb 18	14	Flavivirus, Coronavirus	chap 17, 19
Feb 23	15	Review session during lecture Midterm 2 at 6:30 PM (Cntr 119 & 216)	
Feb 25	16	Mononegavirales	chap 20, 21
Mar 2	17	Orthomyxovirus	chap 23
Mar 4	18	Reovirus, Retroviruses	chap 24, 25
Mar 9	19	Hepadnavirus, Prions	chap 28, 30
Mar 11	20	Vaccines	chap 34
Mar 18	--	Final Exam (3-6 PM)	

* Readings in *Fundamentals of Molecular Virology*, Nicholas Acheson (2007)
There will be copies on reserve at the Biomedical Library.

Chapters 1 – 4 are to be read in their entirety. Other chapters are intended to reinforce the lectures, so read the sections which describe material covered in lecture.

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, 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** during the lecture time on the day of each midterm. A review session for the final exam will be held the evening of Tues March 16.

The **midterms** will be held outside of the regular lecture time.
They will be Tues Jan 26 and Tues Feb 23, 6:30-8 PM in Center 119 and 216.

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.

Midterm 1	25%
Midterm 2	25%
Final exam	50%

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.

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.

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

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