BIO 447/547
VIROLOGY
Syllabus for Fall Semester 2020

Lecture Meeting Time: T/R 9:30-10:45 AM - LSS 277

Instructor: Dr. Lee Fortunato
LSS Rm 147 (office)/ Gibb Hall Rm 125/6 (lab)
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office hours: By appointment

Recommended Textbook: Principles of Virology Fourth Edition by Flint, Enquist, Racaniello and Skalka- ASM Press copyright 2015 – this is a two-volume set. You can probably pick it up quite inexpensively now as a used set on Amazon (last check - $100 for both!!). These are excellent reference texts, although they are a bit dense. My lectures will be a distillation of these textbook chapters.

Grading for the class:
a) Your /grade will primarily be determined by your performance on four exams:
Exam #1 (Sept. 15th- in class) 20% (undergrads) 15% (grad students)
Exam #2 (Oct. 8th – in class) 20% (undergrads) 15% (grad students)
Exam #3 (Nov 3rd – in class) 25% for everyone
Exam #4 (Dec 3rd – in class) 30% for everyone

The exams will be primarily short answer/essay type exams that will be designed to test your comprehension/understanding of the basics that we cover in class. I will provide practice exam questions and answers the week before the exam so that you will be able to prepare for this style of exam. Please let me know **AT LEAST 1 WEEK PRIOR** to a scheduled exam if you have a conflict with the time. I will be happy to arrange for you to take the exam at an alternate time if necessary. In addition, reasonable accommodations are available for students who have a documented disability. Please notify me during the first week of class of any accommodations needed for the course. Late notification may cause the requested accommodations to be unavailable. All accommodations must be approved through the Center for Disability Access and Resources (CDAR) in the Bruce Pitman Center, Suite 127, phone # 885-6307, email cdar@uidaho.edu.

Each exam will be graded on a curve, with the mean of the scores on that exam being the middle of the B range for that exam. One half of one standard deviation above that mean is the dividing line between an A and a B for that exam; one half of one standard deviation below the mean divides a B and a C for that exam. One additional full deviation below this divides a C and a D for that exam. One more full deviation is the cutoff for a D for that exam and below that is an F.

For example, the mean of an exam is 76, with a standard deviation of 16. Then 76 + 8 (half an SD)= 84 is the cutoff for an A for that exam. Following this formula, 76-8=68 is the cutoff for a B for that exam, 68-16=52 is the cutoff for a C for that exam, and 52-16=36 is the lowest grade achieving a D for this exam.

Each exam is curved separately, and you will be told the mean, standard deviation and distribution for each letter grade for each exam when I hand them back. I will give you your mid-semester grades so that you will be able to assess your situation accordingly.

b) **5% of your grade** will be determined by participation in class. Each year, I try to incorporate more active learning exercises, so it will be important to be ready to engage in group-discussions in class. This will include your participation in discussions during grad student presentations, which will happen the last week of the semester (dead week). In addition, after each presentation, you will work in groups to answer questions posed by the grad student presenters. Each group will answer one question at the end of the session. You will hand in your group answer to me for recording.

c) For **grad students** in the class, **the final 10%** of your grade will be determined by your co-leading of one discussion section during class time. You will have the option of **EITHER** giving a presentation about **YOUR THESIS PROJECT and HOW IT RELATES TO THE MATERIAL WE HAVE COVERED OR YOU CAN LEAD A DISCUSSION OF A PAPER IN THE CURRENT VIROLOGY LITERATURE** (last 6 months). You will be graded on your grasp and presentation of the material, your ability to lead a discussion of the topic and your production of a set of handouts for the class. In addition, you must come up with discussion questions for the breakout groups. These presentations will take place on the last week of class (Dec. 8 and 10).

Tentative list of topics to be covered in class (the order may change):

Topic	Chapter (Volume #)
1. General background/History of virology	1 (I)
2. Methods of detection	2 (I)
3. Virus classifications (the Baltimore scheme)	1 (I)
4. Viral structure (capsids/envelopes/packaging)	4 (I)
5. Virus receptors and entry into the cell	5 (I)
6. Review of general molecular biology and overview of viral replication (co-opting the cellular machinery)	WWAMI notes
7. Assembly/maturation/release from the cell	12 + 13 (I)
8. Modes of transmission/patterns of infection	2(I) + 5(II)
9. General pathogenesis	2(I) + 5(II)
10. The host immune response/ viral subversion of the host system	3 + 4(II)
11. Vaccination and antiviral defenses	8 (II)
12. + strand RNA replication strategies	6 (I)
13. – strand RNA replication strategies	6 (I)
14. Retroviruses (general strategies) and HIV/AIDS	7(I) + 6(II)
15. Viral transformation (small DNA viruses) and oncogenesis	7 (II)
Potential other topics (if time allows)	
- virus evolution, emerging viruses and interspecies transmission	10 + 11(II)
- large DNA viruses (lessons from the herpesviruses)	WWAMI notes
- viral vectors and gene therapy	WWAMI notes

Website: There is a BBlearn website set up for class (Biol 447-547 Virology). You should have all been added to the user list of this website. Please let me know if you have NOT been added.

This will have my slides as PDFs and the notes for each lecture. **I expect you to print these out and bring them to class with you (or load them onto your iPAD/tablet).** It will also have PDFs of the papers the grad students will be presenting (if they choose this option) once they are selected. Lastly, it

will have sample exam questions for the different topics we will cover. The list of topics above is not a gage of how long each topic will take. This will vary immensely, as I will not rush through the material just to keep to a timetable! I want you to understand what's going on, no matter how long it takes!

About cheating:
Don't do it….. if I catch you, you will fail the exam. If it happens again, you will fail the class.
END OF STORY.

About carrying firearms:
"The University of Idaho bans firearms from its property with only limited exceptions. One exception applies to persons who hold a valid Idaho enhanced concealed carry license, provided those firearms remain concealed at all times. If an enhanced concealed carry license holder's firearm is displayed, other than in necessary self-defense, it is a violation of University policy. Please contact local law enforcement (call 911) to report firearms on University property."

…. And all things COVID:
As we all know, things can potentially pivot on a dime over the course of this semester. I am going to try my hardest to make our lectures available "in real time" via Zoom starting on 8/25. Please be patient with me! This is crazy stuff and you know there will be glitches along the way!

You will have to register to join with your UI credentials the first time you "zoom" in.
The registration link is here:
https://uidaho.zoom.us/meeting/register/tJMvc-ysqj4pH9zWZ-dEimj5Zi9DnQ3YKi5Q
Our meeting code (for all lectures) will be: 972 4544 5358
And if a passcode is asked for, it is: 320900

The lectures will be recorded and then I will upload them to our MS Stream websites (to which you all should be added as users):
Fall 2020-Biol 447-01 (undergrads) and Fall 2020-Biol 547-01 (grads)

Obviously, if we do go all virtual, the exam format may change slightly, as it is unrealistic to try to give "timed" exams virtually. Please stay tuned and we will discuss this change if the need arises.

And lastly, PLEASE don't make me play good cop/bad cop! You have all been informed about the University policies with respect to attending class if you are sick/COVID+. You have also had the use of face coverings drilled into your skulls. We are ALL adults here…please act like one, respect your neighbors/classmates and adhere to the rules (which are below, just in case you need a refresher):

1. **Daily Symptom Monitoring and In-Person Class Attendance.** Evaluate your own health status before attending in-person classes and **refrain from attending class in-person if you are ill, if you are experiencing any of the known symptoms of coronavirus, or if you have tested positive for COVID-19 or have been potentially exposed to someone with COVID-19**.

2. **Face Coverings. You are required to wear a face covering over your nose and mouth in this classroom at all times**. a. If you have a medical condition that you believe affects your ability to comply with the face covering policy, please contact the Center for Disability Access and Resources (CDAR) to request a reasonable accommodation.
b. If you have other reasons you believe make you exempt from wearing face coverings, please contact the Covid-19 Coordinator at covid19questions@uidaho.edu.
c. Failure to wear a face covering means you will be required to leave the classroom. If a disruption to the learning experience occurs due to repeated offence and/or egregious behavior, it will be referred to the Dean of Students Office for potential code violation.