

BIOL 563: Virology
Fall 2016
4:30 pm – 7:10 pm Tues
Bull Run Hall 248

Lecturer: Dr. Kylene Kehn-Hall

Office: 1010 Biomedical Research Laboratory, Science and Technology Campus

Office Hours: By appointment

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Phone: (703) 993-8869

Webpage: Blackboard <http://courses.gmu.edu>

Course Description: This is a graduate level virology course in which the principles of infectious diseases caused by selected animal viruses will be presented. Discussions of viral diseases will include the structure of the virus in question, its replicative cycle, and its role in disease.

Learning objectives:

- Understand the replication strategy and basic molecular biology for all organisms discussed.
- Understand the pathogenesis of infectious disease in terms of immune response, modulation of host factors, and systemic alterations.
- Understand strategies for the treatment of infectious diseases.
- Learn how to comprehend, analyze and efficiently communicate research findings through PubMed article presentations and group discussions.

Course requirements:

- There is a textbook for this course. Students will read “**Fundamentals of Molecular Virology, Second Edition**” by **Nicholas H. Acheson., ISBN: 978-0-470-90059-8**. However, some sections are not extensively covered in this book. Students are required to read papers in the current literature and book chapters listed in the Reading List. These papers are available through GMU online subscriptions via the library.
- Students are required to have a working GMU email account and will receive class-related announcements only to their GMU email address.

Course Schedule (subject to change):

Lecture	Date	Topic	Assignment
1	Aug. 30	Introduction	Chapters 1-4
2	Sept. 6	Intrinsic cellular defense against virus infections	Chapter 33
3	Sept. 13	Positive-strand RNA viruses of eukaryotes: Togaviruses Student Presentations	Chapter 13
4	Sept. 20	Positive-strand RNA viruses of eukaryotes: Flaviviruses (Dr. Cynthia de la Fuente) Student Presentations	Chapter 12
5	Sept. 27	Positive-strand RNA viruses of eukaryotes: Coronaviruses Student Presentations	Chapter 14
6	Oct. 4	Negative-strand RNA viruses of eukaryotes: Filoviruses	Chapter 16

		Student Presentations	
	Oct. 11	<i>No class- Columbus Day (Monday classes meet on Tuesdays)</i>	
7	Oct. 18	Negative-strand RNA viruses of eukaryotes: Arenaviruses Student Presentations	Mid-term Exam handed out
8	Oct. 25	Negative-strand RNA viruses of eukaryotes: Bunyaviruses Student Presentations	Chapter 17
9	Nov. 1	Negative-strand RNA viruses of eukaryotes: Influenza Student Presentations	Chapter 18 Mid-term Exam due
10	Nov. 8	Viruses that use a reverse transcriptase: Retroviruses Student Presentations	Chapters 28 and 29
11	Nov. 15	Small DNA viruses of eukaryotes: Papillomaviruses Student Presentations	Chapter 22
12	Nov. 22	Larger DNA viruses of eukaryotes: Herpesviruses Student Presentations	Chapter 24
	Nov. 29	<i>No class</i>	Final Exam posted
13	Dec. 6	Larger DNA viruses of eukaryotes: Poxviruses Student Presentations	Chapter 26
FINAL EXAM	Dec. 13	FINAL Tues. 12/13 4:30 p.m.–7:15 p.m.	Final Exam due

Grading:

Oral presentations (20%)

Throughout the course, journal articles will be presented by students either individually or in groups (depending on the enrollment that semester). These articles are chosen to complement the lecture material. The presentation should minimally include: 1) background information, 2) material and methods, 3) results, and 4) conclusions. Presentations should last 30-45 minutes. All students in the group should participate in the presentation as equally as possible; with each student presenting some of the data. Questions may be asked throughout the presentation by the instructor and other students.

Take home mid-term (35%)

Questions should be answered thoroughly, but concisely. The exam will consist of 5-7 essay questions that should be answered in no more than 2 single spaced pages per question. At least 5 PubMed references are expected per answer. Do not work in groups or get information from others.

Take home final (35%)

Questions should be answered thoroughly, but concisely. The exam will consist of 5-7 essay questions that should be answered in no more than 2 single spaced pages per question. At least 5 PubMed references are expected per answer. Do not work in groups or get information from others.

Participation (10%)

You need to come to class, and you have to be there mentally as well as physically. You are expected to read any assigned literature prior to class so that you can discuss the paper and ask questions during the class period.

Late Work Policy

Late work will only be accepted if it has been **prearranged** and this is up to the professor's discretion. Exceptions will be made for emergency situations.

Final grades:

93-100	A
90-92	A-
87-89	B+
83-86	B
80-82	B-
77-79	C+
70-76	C
60-69	D
<60	F

Disability Statement

- If you are a student with a disability and you need academic accommodations, please see me and contact the Office of Disability Resources at 703.993.2474. All academic accommodations must be arranged through that office.

Honor Code Statement

- George Mason University has an Honor Code, which requires all members of this community to maintain the highest standards of academic honesty and integrity. Cheating, plagiarism, lying, and stealing are all prohibited
- All violations of the Honor Code will be reported to the Honor Committee.
- See honorcode.gmu.edu for more detailed information.

Enrollment Statement

- Students are responsible for verifying their enrollment in this class.
- Schedule adjustments should be made by the deadlines published in the Schedule of Classes.
 - Last Day to Add: **Sept. 6th**
 - Last Day to Drop: **Sept. 30th**
- After the last day to drop a class, withdrawing from this class requires the approval of the dean and is only allowed for nonacademic reasons.
- Undergraduate students may choose to exercise a selective withdrawal.
- See the Schedule of Classes for selective withdrawal procedures.