

BIOL 685: Emerging Infectious Diseases

(Monday: 4:30-7:10pm)
(Bull Run Hall Room 247)

Instructor: Dr. Fatah Kashanchi Ph.D.
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Office Hours: By appointment
Office: 182C

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.

Grading:

- **Oral presentations (30%)**
Students will be assigned a research topic that will include research papers from the literature and will present PowerPoint presentations explaining the papers. The presentation should focus on the aspects of molecular biology, epidemiology, and treatment.
- **Take home mid-term (30%)**
The exam will consist of 10 essay questions that should be answered in 2-3 pages per question. At least 5-10 PubMed references are expected per answer. Figure are to be included in legends are required for each figure. **Do not work in groups or get information from others. All responses should be sent as one complete document in a PDF within two weeks of the date given.**

All of your answers must include:

- Typed with a legible font (i.e. Arial 11). There needs to be figure legends for every figure (4-5 sentences) to explain the content of each figure.
- Figures (not too large to occupy much of the space of the response).
- The use of Pub med (and no other reference data base) for all of your answers.
- References: All the references used for each question (5-10 for each question) need to be at the end of the document in a reference section. For instance if you use 10 references for the first question then you would have to number them in the text in parenthesis, for example question 2: would begin with reference # 11, 12, 13, etc.

- **Take home final (30%)**

The exam will consist of 10 essay questions that should be answered in 2-3 pages per question. Questions should be answered thoroughly, but concisely At least 5-10 PubMed references are expected per answer. Figure are to be included in legends are required for each figure. **Do not work in groups or get information from others. All responses should be sent as one complete document in a PDF within two weeks of the date given.**

All of your answers must include:

- Typed with a legible font (i.e. Arial 11). There needs to be figure legends for every figure (4-5 sentences) to explain the content of each figure.
- Figures (not too large to occupy much of the space of the response).
- The use of Pub med (and no other reference data base) for all of your answers.
- References: All the references used for each question (5-10 for each question) need to be at the end of the document in a reference section. For instance if you use 10 references for the first question then you would have to number them in the text in parenthesis, for example question 2: would begin with reference # 11, 12, 13, etc.

- **Participation (10%)**

You need to come to class, and you have to be there mentally as well as physically. Attendance will be taken. 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.

Class Schedule

<u>Date</u>	<u>Topic</u>
August 26 th	General overview
September 2 nd	No Class- Labor Day
September 9 th	HIV/HTLV
September 16 th	Endogenous Viruses
September 23 rd	Humanized Mouse Models
September 30 th	Innate Immune response
October 7 th	Autophagy/Necroptosis
October 14th	No Class- Columbus Day
October 15 th (Tuesday)	Midterm Given
October 21 st	Exosomes/T-cell Exhaustion/ Sensing
October 28 th	Transcription/Epigenetics/Chromatin and Viruses
	Midterm Due
November 4 th	Gene Editing and Viruses

November 11th
November 18th
November 25th
December 2nd
December 9th

Hepatitis
HPV
Influenza/ Ebola / **Final Exam Given**
No Class
Final Exam Due

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: September 3rd
 - Last Day to Drop: September 9th - no tuition penalty
 - Last Day to Drop: September 17th - 50% tuition refund
 - Self-Withdrawal : September 18th – 30th no tuition refunded
- 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.(Oct 1st to Oct 29th)
- See the Schedule of Classes for selective withdrawal procedures.