

**BIOS 704: Topics in Biosciences**  
**BIOL 695: Seminar in Molecular and Microbiology**

**“Viruses and the Blood-Brain Barrier”**

Fall 2018, Mondays 5:55 pm – 7:10 pm  
Bull Run Hall, Rm 132

**Instructor:** Dr. Kylene Kehn-Hall  
**Email:** kkehnhal@gmu.edu  
**Phone:** 703-993-8869  
**Office Hours:** By appointment  
**Office:** Biomedical Research Laboratory 1010  
Alternative office: Colgan Hall 312

**Overview**

This course presents an opportunity for students to learn how to critically evaluate and to present basic research papers, with a special emphasis on the interplay between viruses and the blood-brain barrier (BBB). It also requires students to perform a literature review on a defined topic, assimilate this information, and convey this in a written format.

**Grading**

- Presentations (40%)
- Participation (20%)
- Research Paper (40%)

**Presentations (40%)**

Students will present 1 journal article to the class. *Papers will be selected by the student(s), but must be approved by Dr. Kehn-Hall. Paper selections need to be finalized 2 weeks prior to the presentation date.*

Presentations should minimally include: 1) background information, 2) material and methods, 3) results, and 4) conclusions. Papers will be presented either individually or in groups if needed. When papers are presented as a group, students should participate in the presentation as equally as possible; with each student presenting some of the data. Each presentation should be approximately 40 minutes, leaving the remainder of the class for discussion and questions. Questions may be asked throughout the presentation by the instructor and other students.

**Participation (20%)**

Students are expected to read all research papers prior to class so that they can discuss the paper and ask questions during the class period. It is expected that every student asks one question per presentation.

**Research Paper (40%)**

Students must write a research paper describing the BBB and how a particular virus (selected by the student) influences the BBB. *Virus selection must be approved by Dr. Kehn-Hall by Oct. 15.* The paper must go beyond what has been discussed/presented in class. The write-up should

be four to five pages (single-spaced), with a separate page listing the references used. References should be cited throughout where appropriate.

**Schedule** (The presentation schedule will be posted following the first day of class.)

<b>Presentation Schedule</b>			
<b>Date</b>	<b>Presentation Topic</b>		<b>Student(s)</b>
Aug. 27	Course overview and topic/presentation assignments		
Sept. 3	NO CLASS – LABOR DAY		
Sept. 10	Lecture #1: Introduction to the BBB		
Sept. 17	Lecture #2: Viruses and the BBB		
Sept. 24	Student presentations	Novel methods/model systems to study the BBB	
Oct. 1	Student presentations	HIV (NeuroAIDS) and the BBB	
Oct. 9 (Tues)	Student presentations	Flaviviruses and the BBB	
Oct. 15	Guest Lecture: Dr. Andre Adams, Naval Research Laboratory, 3D systems for BBB Research		
Oct. 22	Student presentations	Flaviviruses and the BBB	
Oct. 29	<b>No class</b>		
Nov. 5	Student presentations	Other viruses and the BBB	
Nov. 12	Student presentations	Other viruses and the BBB	
Nov. 19	Student presentations	Drug delivery through the BBB	
Nov. 26	Student presentations	Drug delivery through the BBB	
Dec. 3	MAKE-UP/work on research paper		
Dec. 10	<b>Final written assignment due</b>		

A make-up day is provided in case presentations run over the scheduled time and/or class has to be canceled.

**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. 4th**
  - Last Day to Drop: **Sept. 9th**
- 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.