

## **Topics: Debates in Biochemistry**

### **CLASS MEETINGS**

MWF 11:00–11:50 p.m. in Olin 103

### **INSTRUCTOR**

Prof. Scott Horowitz  
scott.horowitz@du.edu

Instructor Office Hours in ECS 561: By appointment- please send me an email. I'm flexible.

### **COURSE DESCRIPTION**

This course is meant to be an introduction to reading and understanding biochemistry primary literature. Students will also learn about grant writing and leading scientific discussions. Required reading will be primary biochemistry literature, with further reading to be discussed individually with discussion leaders and prior to the final grant writing assignment.

### **COURSE LEARNING OUTCOMES**

1. Present, discuss and analyze the science in each paper in the course.
2. Compare the points of view in the classroom debates.
3. Design and write a novel research grant independently.

### **COURSE REQUIREMENTS**

1. Attendance (5% of grade)
2. In-class participation when not presenting (20% of grade)
  - Participation is graded primarily on amount of participation and secondarily quality of participation.
3. Reading before each class (5% of grade, based on Canvas quizzes)
4. Presentations (40% of grade).
  - Detailed presentation outlines and slides must be sent to instructor at least 24 hours prior to your presentation.
  - In the case of presenting in pairs, each presenter must have specified separate figures/text they are responsible for as opposed to both presenting on everything. This must be specified in the outline beforehand.
5. Grant-writing project (30% of grade).
  - 25/30% from final grant
  - 2/30% from initial topic deadline
  - 2/30% from second topic deadline
  - 1/30% for first draft

## LATE WORK/EXAM AND ATTENDANCE POLICY

Late written assignments are penalized 10% for each day past the deadline. Except under extraordinary circumstances (e.g. a doctor's note is required for illness), class presentations cannot be made up.

If you are unable to attend class due to a legitimate emergency, please contact me via e-mail. If you are not in class for any other reason, you will be marked absent and earn a zero for the day. Students who arrive more than five minutes late will earn 50% attendance for the day.

## PRESENTATIONS AND DISCUSSION

Typically, we will be discussing two papers a week, and each paper will be presented by a different person. Based on the size of the class, this means that everyone will present twice over the course of the quarter. In most weeks, two students giving presentations, with one student signed up to lead discussion on each paper. The other student will be expected to comment and discuss the paper that they did not sign up for at a high level. Other members of class will be expected to read the papers and participate in discussion.

## DETAILED SCHEDULE

<b>Date</b>	<b>Subject</b>	<b>Due Dates</b>
3-Jan	Introduction	
5-Jan	CH...O Bonds 1	Read Sutor 1962 and Donohue 1968, quiz.
7-Jan	CH...O Bonds 2	Read Taylor 1982, quiz
10-Jan	CH...O Bonds 3	Read Schwalbe 2012, Sign up for two papers
12-Jan	Grant writing	
14-Jan	Phosphorous 1	Read Wolfe-Simon 2011, quiz
19-Jan	Phosphorous 2	Reaves, 2012, quiz; First topic deadline
21-Jan	Phosphorous 3	
24-Jan	Quadruplex 1	Read Biffi 2014, quiz
26-Jan	Quadruplex 2	Read Guo 2016, quiz
28-Jan	Quadruplex 3	
31-Jan	Lipid raft 1	Read Zhu 2005, quiz
2-Feb	Lipid raft 2	Read Otahal 2010, quiz; Second topic deadline
4-Feb	Lipid raft 3	
7-Feb	Chaperone 1	Brinker 2001, quiz
9-Feb	Chaperone 2	Apetri 2008, quiz
11-Feb	Chaperone 3	
14-Feb	Enzymology 1	Read Schwans 2011, quiz
16-Feb	Enzymology 2	Read Jacobitz 2014, quiz
18-Feb	Enzymology 3	
21-Feb	Histones 1	Read Gao 2011, quiz
23-Feb	Histones 2	Read Kamps 2015, quiz
25-Feb	Histones 3	
28-Feb	DNA damage 1	Read Slupphaug 1996, quiz, Grant drafts due

2-Mar	DNA damage 2	Read Cao 2004, quiz
4-Mar	DNA damage 3	
7-Mar	AB 1	Read Cheng 2007, quiz
9-Mar	AB 2	Read Pieri 2012, quiz
11-Mar	No class	
14-Mar	AB 3	
16-Mar		Grant final version due