Graduate Discussion
BB 621 Biochemistry I
Fall 2024

Meeting Time: Wednesday 11:15 AM–12:00 PM
Meeting Place: Life Sciences and Engineering (LSE), Room 1004 (10th floor)

INSTRUCTOR:

Dean Tolan, Ph.D. (tolan@bu.edu)

OVERVIEW

The discussion section of BB 621, which is worth 15% of your total grade is intended to introduce you to the critical analysis of the primary literature in biochemistry. The primary method of this will be a reading and critiquing primary research articles and discussions of data presented in these articles in both oral and written form.

CO-REQUISITES

You must be in a graduate program and be registered for BB 621.

TEXTBOOKS & OTHER MATERIALS

There is no text for this part of the course. In preparation for writing your assignments, students will be given guidelines for good scholarship. You will need access to the Internet for literature research and article retrieval.

CONDUCT

All students are expected to know and understand the provisions of the Academic Conduct Code: (http://www.bu.edu/academics/resources/academic-conduct-code/). Cases of suspected academic misconduct will be referred to the Dean's Office.

Assessment

This discussion section, and your work in it, will comprise 15% of your BB 621 grade. Attendance and participation are required, which will comprise 40% of the final discussion grade. Your written work on data presented in articles from the literature, and any critical evaluation of such data, will comprise 40% of the final discussion grade. Your presentations (9–10 min) will comprise 20% of the final discussion grade

You will choose an enzyme and find publications that describe the following: The EC number, the species and/or tissues in which it's found, the reaction(s) it catalyzes, the steady-state kinetic values for that reaction, anything on its structure, and a description of inhibitors and/or regulators of the enzyme's activity and how they work, how it fits into the overall metabolism or metabolic pathway, and anything about its enzyme mechanism (i.e., what mechanistic strategies does it use).

The actual **writing assignment (40%)** should include 3–5 pages of text and should include Figures and tables that provide the relevant information mentioned above. You are welcome to provide historical or intriguing information you discover in your

literature search. As part of you assignment, please use PROPER CITATIONS AND ACADEMIC CONDUCT! The page limit does not include your citations, which can take as much room as you need. For each citation, use the following format:

JOURNAL ARTICLES: Authors (list ALL), (YEAR) Title. *Journal (full name or PubMed abbreviation),* **Volume**, inclusive pages.

BOOKS OR BOOK CHAPTERS: Author(s) (list ALL), (YEAR) *Title*. **Edition**, inclusive pages or number of pages.

Lastly, you will make a 9-10-minute **presentation (20%)** on your enzyme during the last two session in December. This will be made using a maximum of 4 slides.

SCHEDULE Fall 2024

BB 621 – Fall, Wednesdays 11:15-12:00 (LSEB-1004)

Date	*Topic*	
Oct 9	Introductions	
Oct 16	Assignment; reading the literature and good scholarship	
Oct 23	Enzyme selection (have it done by this time)	
Oct 30	No Class	
Nov 6	Enzyme structure and activity: How to analyze	
Nov 13	No Class	
Nov 20	No Class	
Nov 27	No class – Thanksgiving Break	
Dec 4	Final presentations (5 people)	
	Aiman	Acetylcholinesterase
	Ainur	DNA Photolyase
	Joren	Phosphoglycerate kinase
	Will	RUBISCO
	Ria	11β-Hydroxysteroid Dehydrogenase Type 1
Dec 11	Final presentations (4 people)	
	Janice	Lipase
	Logan	Aromatase
	Na	DNA-methyl transferase
	Jake	Superoxide dismutase
Dec 20	Paper DUE (5 PM)	