

Topics in Biological Chemistry (CHMD79H) – Winter 2016

University of Toronto at Scarborough

Welcome to CHMD79! At this point in your studies, you have learned much about the fundamentals of biological chemistry. This course will build on these fundamentals and introduce you to some of the exciting research currently underway in this diverse field. Several topics of interest have been selected, including metals in medicine, antibiotics, food chemistry and biocatalysis. Lectures will provide an overview on each topic followed by an analysis of current research articles in the area. Toward the end of the course, we will shift focus to highlighting the research of several leading experts in the field of biological chemistry, including two located right here at UTSC. Recommended preparation for this course includes CHMB31, either CHMC41 or CHMC42, and CHMC47.

Please take a few minutes to read through this document. It contains important information that will help ensure your success in this course.

Instructor:

Dr. Effie Sauer

EV554

Email: esauer@utsc.utoronto.ca

Office Hours: Mondays and Wednesdays, 2:30 – 3:30 pm

Lecture Schedule:

Thursdays 2-4 pm in AA206

Website:

CHMD79 maintains a Blackboard web space which archives a variety of course-related information including: class announcements, assigned readings, grades, contact information and links to outside resources. In addition, class emails will periodically be sent via Blackboard. ***In order for you to receive these emails, you must have a valid “utoronto.ca” email account registered with ACORN.***

Method of Evaluation:

Your grade in this course will be calculated as follows. More detailed descriptions of each item can be found below.

Quizzes (3)	15%
Term Test	30%
Assignment I	10%
Assignment II	20%
Group Presentation	15%
Course Participation	10%
Total	100%

Quizzes:

There will be three quizzes throughout the semester, each worth 5% of your final grade. Quiz dates can be found in the lecture schedule below. Note that quizzes will begin promptly at the beginning of class.

Assignment I:

In preparation for your term test, you will be asked to prepare a set of questions appropriate for use on the test. The pooled questions will be posted on Blackboard for the class to use as a study aid. Between 5% and 10% of the actual test questions will be taken from the questions generated from this assignment.

Assignment II:

Each student will select a Nobel Prize topic from the past three decades and write a short paper (1-2 pages) on the topic, including its impact on current research in biological chemistry. In addition, students will present a brief (5 minute) presentation of their topic on the last day of class. Note that topics will require pre-approval by the course instructor.

Group Presentation:

The class will be divided into groups of approximately 3 students each. Each group will be randomly assigned to an original research article related to one of the lecture topics. The group will be expected to present a critical analysis of the article and lead the class through a brief discussion on the paper (10-15 minutes total). Presentations will happen throughout the term depending on where the group's topic is found in the lecture schedule.

Course Participation:

A portion of your grade will come from your participation in the course. For the most part, this means making a *meaningful* contribution to class discussions; however, there are other ways of contributing that may also be considered when assigning your grade such as posing thoughtful questions during student presentations, or one-on-one exchanges via email or office hours (assuming they demonstrate critical thought about the course material).

Since class discussions are unlikely to have been a major part of your previous chemistry courses, I want to make sure that you understand what I expect of you. Below is a sample rubric of how I will grade your in-class participation.

	Excellent	Needs Some Improvement	Unsatisfactory
Listening	Actively and respectfully listens to peers and instructor	Sometimes displays lack of interest in comments of others	Projects lack of interest or disrespect for others
Preparation	Arrives fully prepared having thoroughly read and thought about the assigned readings	Sometimes arrives unprepared of with only superficial preparation	Exhibits little evidence of having read or thought about the assigned readings
Quality of Contributions	Comments are relevant and reflect a deep understanding of the material and the remarks of other students	Comments are sometimes irrelevant, suggesting a lack of preparation, or lack of attention to previous remarks by students	Comments reflect little understanding of either the assigned readings or the remarks of others
Impact on Seminar	Comments frequently help move the conversation forward	Comments sometimes advance the conversation, but other times do little to move it forward	Comments do not advance the conversation or are actively harmful to it
Frequency of Participation	Actively participates at appropriate times	Sometimes participates but at other times is "tuned out"	Seldom participates and is generally not engaged

Lecture Schedule:

Date	Lecture Topic	Due Dates*	
Jan 7 th	Introduction to the course and subject		
Jan 14 th	Metals in Medicine:		
Jan 21 st	General overview and current research	Quiz #1	Group 1
Jan 28 th	Food Chemistry		Group 2
Feb 4 th	Biocatalysis	Quiz #2	Group 3
Feb 11 th	Antibiotics:		
Feb 25 th	General overview and current research	Assignment 1	Group 4
March 3 rd	In class term test	Term Test	
March 10 th	Focus on Researcher: Carolyn Bertozzi		Group 5
March 17 th	Focus on Researcher: Prof. Xiao-an Zhang		
March 24 th	Focus on Researcher: Prof. Kagan Kerman		
March 31 st	Assignment 2 presentations	Quiz #3 & Assignment 2	

*Unless otherwise instructed, all graded work will be due at the start of lecture.

Accessibility:

Students with diverse learning styles and needs are welcome in this course. In particular, if you have a disability/health consideration that may require accommodations, please feel free to approach me and/or the *AccessAbility* Services as soon as possible. *AccessAbility* Services staff (located in Rm SW302, Science Wing) are available by appointment to assess specific needs, provide referrals and arrange appropriate accommodations 416-287-7560 or email ability@utsc.utoronto.ca. The sooner you let us know your needs the quicker we can assist you in achieving your learning goals in this course.

Academic Integrity:

Academic integrity is one of the cornerstones of the University of Toronto. It is critically important both to maintain our community which honours the values of honesty, trust, respect, fairness and responsibility and to protect you, the students within this community, and the value of the degree towards which you are all working so diligently.

According to Section B of the University of Toronto's Code of Behaviour on Academic Matters <http://www.governingcouncil.utoronto.ca/policies/behaveac.htm> which all students are expected to know and respect, it is an offence for students to:

- To use someone else's ideas or words in their own work without acknowledging that those ideas/words are not their own with a citation and quotation marks, i.e. to commit plagiarism.
- To include false, misleading or concocted citations in their work.
- To obtain unauthorized assistance on any assignment.
- To provide unauthorized assistance to another student. This includes showing another student completed work.
- To submit their own work for credit in more than one course without the permission of the instructor.
- To falsify or alter any documentation required by the University. This includes, but is not limited to, doctor's notes.
- To use or possess an unauthorized aid in any test or exam.

There are other offences covered under the Code, but these are by far the most common. Please respect these rules and the values which they protect. Offences against academic integrity will be dealt with according to the procedures outlined in the Code of Behaviour on Academic Matters.

Turnitin.com:

Normally, students will be required to submit their course essays to Turnitin.com for a review of textual similarity and detection of possible plagiarism. In doing so, students will allow their essays to be included as source documents in the Turnitin.com reference database, where they will be used solely for the purpose of detecting plagiarism. The terms that apply to the University's use of the Turnitin.com service are described on the Turnitin.com web site.