

CHEM 4723 COURSE SYLLABUS

Topics in Biochemistry: MEDICINAL CHEMISTRY
Fall 2014

Instructor:	Dr. Sherri A. McFarland Location: ELL 113 Office hours: TBA and by appointment Phone: 585-1320 Email: sherri.mcfarland@acadiau.ca
Lecture:	M W F 9:30–10:20 AM ELL 109
Textbook:	Not required
Laboratory:	None
Prerequisite:	CHEM 3723 (or by permission)
Important Dates:	Oct. 22 Midterm

Academic Integrity:

Homework, the midterm, quizzes/presentations, and the final examination are evaluations of your *independent* work. Evidence of non-independent work on any one of these evaluations is considered a violation of academic honesty by your professor and will not be tolerated. The penalty ranges from a zero on that piece of work to a zero for the course. Consult the Registrar's website for details regarding academic integrity and the penalties of infraction: http://central.acadiau.ca/registrar/faculty_information/academic_integrity. Consult the Vaughan Memorial Library's website for information about what is considered plagiarism: <https://library.acadiau.ca/guides/plagiarism/student/>. All cases of academic dishonesty will be reported to the University.

Course Philosophy and Objectives:

This course is designed for advanced undergraduate and Master's level students interested in obtaining a thorough understanding of both theoretical and practical aspects of some selected topics related to biochemistry. This year's focus will be on the field of medicinal chemistry, also known as *med chem*. Medicinal chemistry draws on concepts from general, organic, physical, and biological chemistry. As such this course will bridge content from multiple branches of chemistry, helping you to extend existing knowledge and to acquire new knowledge relating to problems in human health. At the end of the course, you should be able to understand a professional medicinal chemistry lecture, which typically includes the following points:

- Introduction to a disease
- Coverage of possible points of intervention for a drug
- Discovery of weakly active drug hits through screening
- Selection of drug leads
- Optimization of a clinical drug candidate
- (Often) some details of drug synthesis

This course will cover the following topics:

- Introductory material and review
- Selecting a disease and the FDA approval process
- Pharmacodynamics
- Pharmacokinetics
- Drug discovery
- (Possibly) some examples from personal experience

Students are encouraged to learn about the course topics independently as well as in the lecture and to seek out related topics for discussion. This course is very flexible and will be most interesting and engaging when students take an active role in directing some of the topics for discussion. This participation could include (but is not limited to): contributions in lecture, email suggestions of topics, selections of relevant scientific papers for discussion, *etc.*

Attendance:

Lecture attendance is highly recommended, and attendance at the midterm test and the final examination is compulsory. The only acceptable reasons (DOCUMENTATION REQUIRED) for absence from the midterm test or the final examination are illness, participation in a varsity sport, and serious personal emergencies.

Your Responsibilities:

Periodic evaluations and assignments will be given throughout the term to assess your knowledge and understanding of the topics under discussion. Your overall performance will be calculated according to the scheme giving the best final grade.

Midterm	20%
Quizzes	20%
Assignments/participation	20%
Final exam	40%

Midterm	30%
Assignments/participation	20%
Final exam	50%

Letter grades will be assigned according to the guidelines outlined by the University (see Registrar's website). Point cutoffs may be lowered (but not *raised*) depending on the overall class mean and an individual student's progress.

Midterms:

The 50-minute midterm test will be held during the regular class period and will cover topics from class lectures, assigned reading, and other relevant material. **Make-up tests are not given for any reason.** If you have missed a test due to illness, participation in a varsity sport, or a family emergency and have valid documentation, notify the registrar in writing (describe the circumstances that resulted in your absence, DOCUMENTATION REQUIRED) and copy this email to your professor no later than one week after the missed test. A missed test with no valid reason or documentation submitted by the deadline will count as zero. An excused test will be eligible for replacement with the final examination mark.