CHEMBIO 40B3 – Medicinal Chemistry: Drug Design and Development  (Updated Dec. 14th/2016)

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Office Hours: Tuesday 12:30-1:30 or by appointment.
Lectures/tutorial: Tue/Thu/Fri 11:30-12:20pm, BSB-120.

Outline: Topics will be selected from: lead compound discovery strategies; high throughput screening and in-silico screening; exploration of structure-activity relationships; drug targets and molecular mechanisms of drug action and strategies for drug optimization.

Prerequisites: CHEM 3OA3 (Org. Chem) or CHEMBIO 3OA3 (Bio-organic). (Note OR).

Software: ChemDraw Ultra V10; Mercury viewer (CCDC).

Assessment

Assignments (2) 0%
Mid Term 25%
Term project/Team Presentation 25%
Final exam 50%

Assignments: A series of questions designed to apply the concepts presented in class. These are for practice only and answers will be posted before the mid term.

(Note: Recess: Mon. Feb. 20th – Sun. Feb. 26th.)

Mid-Term: Duration of 50 mins, to be held on Tuesday, Feb. 28th during the regular scheduled class. Students who miss a mid-term test for a valid reason AND who have the Dean's permission (see below) will have their final exam increased by the value of the term test.

Missed Assignments and Tests: Failure to hand in an assignment, literature research report or write a term test will result in a zero grade, unless a valid reason has been filed with and accepted by the Associate Dean's office. It is the student's responsibility to ensure that medical slips, etc. are filed with the Dean. The instructor will not make any exemption decisions under any circumstances.

Group Inquiry-based literature research and presentation:
Students will be “assigned” into groups of six to work on the project as a “team”. Five ongoing “disputes” in the field of medicinal chemistry will be selected. Two teams will investigate each dispute, one team acting as plaintiff (alleging the dispute) and the other as defendant. Each project will be presented as a court case with each team arguing their case (15 minutes each) regarding the litigation in question. The rest of the class will function as jury in “deciding” the outcome. Each team will submit a one-page summation of the arguments favouring their case. No formal report will be necessary.

Final: Scheduled examination to take place in April. A passing grade must be attained in the final examination to pass the course.

Academic dishonesty:
Academic dishonesty consists of misrepresentation by deception or by other fraudulent means and can result in serious consequences, e.g. the grade of zero on an assignment, loss of credit with a notation on the transcript (notation reads: “Grade of F assigned for academic dishonesty”), and/or suspension or expulsion from the university.

It is your responsibility to understand what constitutes academic dishonesty. For information on the various kinds of academic dishonesty, please refer to the Academic Integrity Policy, specifically Appendix 3, located at http://www.mcmaster.ca/senate/academic/ac_integrity.htm

The following illustrates only three forms of academic dishonesty:
1. Plagiarism, e.g. the submission of work that is not one’s own or for which other credit has been obtained. For example, submitting someone else’s lab report and results.
2. Improper collaboration in group work. For example, submitting assignments containing answers generated by a group.
3. Copy or using unauthorized aids in tests and examinations.