Chem Bio 3P03 Biomolecular Interactions
Fall 2016 Session (Term 1)

Course Outline and General Information
Note: Possibly subject to change.

Check  http://avenue.mcmaster.ca  regularly for updates/announcements. All assignments and lecture notes will be posted on avenue.

Instructor: Ryan Wylie
Contact Information: office: ABB 261a, ext. 23477, E-mail: wylier@mcmaster.ca (email is the preferred method of contact)

Lectures:  Tue Sept 6, 2016 – Tue Dec 6, 2016;
3 times per week: Monday (12:30 to 13:20), Tuesday (13:30 to 14:20) and Thursday (12:30 to 13:20)

Location for Lectures: HSC 1A4

Office hours: Weekly: Tuesdays at 3:00pm in my office (ABB-261a). Contact by email to reschedule if needed. Dedicated office hours may change depending on student schedules.

General Topics:
- Principles and characterization of biomolecular interactions, from macromolecule-small ligand binding to macromolecule-macromolecule recognition in vitro and in vivo.
- This course will introduce students to theoretical tools and modern experimental methods used to quantitatively analyze biomolecular interactions.
- As much as possible, these will be illustrated by reference to state-of-the-art applications to problems in chemical biology and drug discovery reported in the recent literature.

Reference Material: You are required to know what is explained and discussed during the lectures as well as all the material related to the assignments and inquiry project. There is no recommended specific textbook but if you wish to consult books the following may be useful:

Principles of Physical Biochemistry
Kensal E. van Holde, W.C. Johnson, P.S. Ho
Pearson Prentice Hall - 2nd or more recent ed.

Molecular Driving Forces
Ken A. Dill, S. Bromberg
Garland Science

The Molecules of Life - Physical and Chemical Principles
John Kuriyan, Boyana Konforti, David Wemmer
Garland Science

- Published in the summer of 2012
- Relevant biological examples
- Clear explanations and illustrations
- E-book (~$9/chapter)
Grading Scheme:

1. **Assignments 10 % (5 assignments)**
2. **Midterm 1, 17.5 %**
3. **Midterm 2, 17.5 %**
4. **Inquiry project, 15 %** A method based project; more guidelines and details for this will be provided as the course progresses.
5. **Final exam, 40 %**: the final will cover ALL the material in the course, possibly including also what presented in class by the inquiry groups.

If you miss any of the midterms for a valid reason (e.g. medical), the final will be weighed an additional 15%. If you miss the inquiry project, the final will be weighed an additional 15%. For instance, if you miss the inquiry and one midterm, your final will have a weight of 10+15+45 = 70 %.

The final exam may replace 1 Midterm if the final exam grade is higher than that of the midterm. The final exam cannot replace both midterms even if the final exam grade is higher than both midterms.

The lowest assignment grade will not be used to calculate the final grade.

Midterms will be conducted in class and will consist of a mixture of multiple choice and short answer questions. Calculators will be permitted.

All assignments, class notes and announcements will be posted on Avenue to Learn.

**Schedule:**

- **Assignment 1**  Sept 22
- **Assignment 2**  Oct 4
- **Assignment 3**  Oct 27
- **Assignment 4**  Nov 8
- **Assignment 5**  Nov 24
- **Midterm 1**  Oct 6
- **Midterm 2**  Nov 10
- **Project report**  Nov 24
- **Presentations**  Nov 28, 29 or Dec 1
- **Final Exam**  TBD

**Review Quiz:** Not graded, will be held on most Mondays (see calendar) to review material from previous week. Will be administered using Socrative, requires any internet ready device (smartphone, tablet, PC). Does not require an account and is completely free. Just enter name and room 3P03. Permitted to work in groups. Duration ~20 to 25 minutes.
Delays/deferrals/permissions/missed tests: They are always ultimately decided by the Associate Dean and not by me. Please contact the office of the Associate Dean if you have questions about delays, deferrals and/or permissions (http://www.science.mcmaster.ca/associatedean/).

Prerequisite: CHEMIO 2P03

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/academicintegrity/

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. (Insert specific course information, e.g. style guide)
2. Improper collaboration in group work.
3. Copying or using unauthorized aids tests and examinations.

Note_1: Please notice that your attendance to class implies agreement to posting student numbers in score tables.

Note_2: The instructor and university reserve the right to modify elements of the course during the term. The university may change the dates and deadlines for any or all courses in extreme circumstances. If either type of modification becomes necessary, reasonable notice and communication with the students will be given with explanation and the opportunity to comment on changes. It is the responsibility of the student to check their McMaster email and course websites weekly during the term and to note any changes.

Copyright Policy: In this course you will have access to material that is subject to copyright laws. This includes (but is not limited to) the textbook, solutions manual and all resources developed by the instructors such as lab manuals, demonstration videos, quizzes, assignments, tests, class notes and class slides. You are not allowed under any circumstance to share or redistribute this material in any printed or electronic form without the explicit written consent of the copyright holder. This includes posting any course material on Internet bulletin boards, course repositories, social networks, etc.

About Avenue to Learn (A2L): Students should be aware that when they access the electronic components of this course private information such as first and last names, user names for the McMaster e-mail accounts, and program affiliation may become apparent to all other students in the same course. The available information is dependent on the technology used. Continuation in this course will be deemed consent to this disclosure. If you have any questions or concerns about such disclosure please discuss this with the course instructor.

You are encouraged to provide your feedback on the course. Your opinions count and they will help me help you achieve your full potential in this course.
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**MIDTERM BREAK**

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**Project reports due**

**Student Presentations**

**Assignment 5 due**