Instructor Information

Instructor: Kelley M. Smith, M.S., Laboratory Supervisor
Office Location: Room 706C, Chemical Science and Engineering Building
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E-mail: kmsmith@mtu.edu
Office Hours: Tuesdays: 9–11a and 2–4p or by appointment

Course Identification

Course Number: CH3541
Course Name: Biophysical Chemistry Laboratory
Course Location: 404, 408, and 706 in the Chemical Science and Engineering Building
Class Times: Thursday 8:05 – 11:55am
Co-requisite: CH3540 Biophysical Chemistry

Course Description/Overview

This laboratory course is designed to supplement and enhance the materials taught in CH3540. In this course, students will develop skills in biophysical chemistry using experiment and computational methods as well as continued development of their oral and written communication via presentation and formal laboratory reports.

Learning Objectives

The exercises in this course are designed to:
1. Give students experience in theoretical methods used to compute and ultimately predict experimental values important in biochemistry.
2. Expose students to computational software and methods used to compute both geometry and physical properties of simple molecules.
3. Expose students to modern experimental equipment, instruments, and techniques used in biophysical chemistry.
4. Develop the ability to use mathematical analysis to correctly interpret and describe the numerical significance of experimental results.
5. Teach students to work successfully in groups.
6. Have students successfully communicate results in written reports.
Course Resources

Course Website(s)

- <http://www.courses.mtu.edu/>

Supplemental Text


Course Fees

- $205/semester (includes $20 computer usage fee)

Course Supplies

- A bound laboratory notebook

Grading Scheme

<table>
<thead>
<tr>
<th>Letter Grade</th>
<th>Percentage</th>
<th>Grade points/credit</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>93% &amp; above</td>
<td>4.00</td>
<td>Excellent</td>
</tr>
<tr>
<td>AB</td>
<td>88% – 92%</td>
<td>3.50</td>
<td>Very good</td>
</tr>
<tr>
<td>B</td>
<td>82% – 86%</td>
<td>3.00</td>
<td>Good</td>
</tr>
<tr>
<td>BC</td>
<td>76% – 81%</td>
<td>2.50</td>
<td>Above average</td>
</tr>
<tr>
<td>C</td>
<td>70% – 75%</td>
<td>2.00</td>
<td>Average</td>
</tr>
<tr>
<td>CD</td>
<td>65% – 69%</td>
<td>1.50</td>
<td>Below average</td>
</tr>
<tr>
<td>D</td>
<td>60% - 64%</td>
<td>1.00</td>
<td>Inferior</td>
</tr>
<tr>
<td>F</td>
<td>59% and below</td>
<td>0.00</td>
<td>Failure</td>
</tr>
<tr>
<td>I</td>
<td>Incomplete; given only when a student is unable to complete a segment of the course because of circumstances beyond the student’s control. A grade of incomplete may be given only when approved in writing by the department chair or school dean.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>X</td>
<td>Conditional, with no grade points per credit; given only when the student is at fault in failing to complete a minor segment of a course, but in the judgment of the instructor does not need to repeat the course. It must be made up within the next semester in residence or the grade becomes a failure (F). A (X) grade is computed into the grade point average as a (F) grade.</td>
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</tbody>
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Grading Policy

A total of 600pts will be distributed as follows::
Late Assignments
There may be a deduction for each class day that a report is late after the due date. Preliminary lab reports are due before the experiment begins, unless otherwise noted. Final reports are due within 1 week of the scheduled completion of the experiment. The last final report due date is no later than 5p the Friday before finals’ week.

Course Policies
17% of the total possible points will be based on group performance:
• Divide time and effort as equally as possible.
• Notify your group of upcoming absences in advance.
• Your group has the option of not including your name on any report.

The names of all students contributing to a report must be included on the title page of the group reports. If your name is not included on the title page, you will not receive credit unless you submit your own (individual/entire) report.

Students are responsible for conducting themselves in a safe manner, becoming aware of and informed about special hazards of technique, apparatus or chemicals in the chemical laboratory. They are expected to conform to any safety instructions presented orally or in writing by the instructor or contained in posted instructions or safety memoranda that are distributed. The MTU Department of Chemistry laboratory safety rules are available on the Canvas web site: http://www.courses.mtu.edu/

Collaboration/Plagiarism Rules
The following are prohibited in this course and violate the Academic Integrity Code of Michigan Tech.
• Written or digital information exchanges that are inter-group. (Most forms of intra-group communication are acceptable.)
• Use or possession of “scoop” materials for any of the laboratory assignments

University Policies
Academic regulations and procedures are governed by University policy. Academic dishonesty cases will be handled in accordance the University's policies.

If you have a disability that could affect your performance in this class or that requires an accommodation under the Americans with Disabilities Act, please see me as soon as possible so that we can make appropriate arrangements. The Affirmative Action Office has asked that you be made aware of the following:
Michigan Technological University complies with all federal and state laws and regulations regarding discrimination, including the Americans with Disabilities Act of 1990. If you have a disability and need a reasonable accommodation for equal access to education or services at Michigan Tech, please call the Dean of Students Office at 487-2212. For other concerns about discrimination, you may contact your advisor, Chair/Dean of your academic unit, or the Affirmative Programs Office at 487-3310.

**Academic Integrity:**
http://www.studentaffairs.mtu.edu/dean/judicial/policies/academic_integrity.html

**Affirmative Action:**
http://www.admin.mtu.edu/aa/o/

**Disability Services:**
http://www.mtu.edu/dean/disability/services/

**Equal Opportunity Statement:**
http://www.admin.mtu.edu/admin/boc/policy/ch5

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**Course Schedule**

The experiment schedule may also be accessed from the Canvas CH3541 Course pages.