CHEMISTRY 105L: Organic and Biochemistry of Life Laboratory

Term: Spring 2015

Prerequisites: None

Corequisites: CHEM 105 (unless you’ve received a C or better for CHEM 105L previously)

Location/time: Science Hall 2- Room 345 / Thursdays 3-5:45pm

Instructor: Dr. Kambiz Hamadani (e-mails will be through Cougar Courses)

Course Objective: This is the laboratory section of CHEM 105: Organic and Biochemistry of Life. The laboratory experiments are intended to complement and illustrate the material discussed in CHEM 105.

Textbook: Lab manual available online at Cougar Courses.

Student Learning Outcomes:
Upon completion of this course students should:
(1). Be able to successfully perform introductory laboratory techniques.
(2). Be able to properly document experimental observations, analyze experimental results and write clear laboratory reports.
(3). Be able to describe the chemical principles on which the laboratory experiments are based.

Experiment Schedule:

Week of 1/26 - 1/30 Check-in/Mystery Box
Week of 2/02- 2/06 Taking Measurements
Week of 2/09- 2/13 Qualitative Analysis; Testing for Cations and Anions
Week of 2/16 - 2/20 Organic Compounds and Functional Groups
Week of 2/23- 2/27 No Lab
Week of 3/02- 3/06 Quantitative Analysis; Testing for Vitamin C
Week of 3/09- 3/13 Chemical Synthesis
Week of 3/16- 3/20 Solutions
Week of 3/23- 3/27 Quiz 1: Followed by Acids and Bases
Week of 3/30- 4/03 No Lab – Spring Break
Week of 4/06- 4/10 Enzymes
Week of 04/13- 4/16 Lipids
Week of 04/20- 4/24 Carbohydrates
Week of 4/27-5/01 Quiz 2
Week of 5/04- 5/08 No Lab

Pre-Labs: Each lab contains a set of pre-laboratory questions. Please answer these questions on a separate sheet of paper and hand them to the instructor prior to each laboratory period. No pre-lab score is dropped. For each lab a bullet point outline will be checked prior to the start of the laboratory period. If it is not completed you will not be allowed
to participate and will receive a zero for that lab. This outline should include all safety hazards as well as basic steps to follow.

**Lab Reports:** Complete the relevant report section for each lab (neatly) and hand them to your instructor at the end of each lab period. **Please write your name your student ID number and your partners name on each sheet.** Although you will be working in pairs you must complete your own report sheet. **Written answers must be in your own words.** Each lab report will be graded for completeness (show your calculations) as well as clarity and neatness.

- The laboratory with the lowest score will be dropped, and will not count towards the final grade.
- At the end of the semester your instructor will also grade your overall laboratory performance (attendance, participation, preparedness).

**Attendance:** No make-up laboratory sessions will be given. Any missed lab session, either excused or not, will receive zero points. One excused absence may count towards your dropped score. All unexcused absences, with zero points, will be included in the calculation of your final grade (and the next lowest score will be dropped). **Students who miss three laboratory sessions will be dropped from the course.**

**Quizzes:** There will be two quizzes administered during the pre-laboratory session during the semester. **No make up quizzes will be given** unless the student has a valid excuse (severe illness, death in the family, etc.) and the student notifies the instructor within two days of the quiz.

**Grading (points):**

<table>
<thead>
<tr>
<th>Component</th>
<th>Points</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>10 Pre-Labs (10 points each)</td>
<td>100</td>
<td>20%</td>
</tr>
<tr>
<td>11 Lab Reports (30 points each, lowest dropped)</td>
<td>300</td>
<td>60%</td>
</tr>
<tr>
<td>3 Quizzes (40 pts each, lowest dropped)</td>
<td>80</td>
<td>16%</td>
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<tr>
<td>Laboratory performance</td>
<td>20</td>
<td>4%</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>500</strong></td>
<td><strong>100%</strong></td>
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**Writing Requirement:** The University Writing Requirement will be satisfied by a combination of pre-labs, lab reports and quiz questions requiring written answers.

**Students with Disabilities:** Students with disabilities who require accommodation must be approved by the Office of Disabled Student Services (DSS). Please contact this office as soon as possible and should meet with the instructor during office hours (or at some other mutually agreeable time). The DSS office is located in Craven hall 5205. Their telephone number is (760) 750-4905 or TTY (760) 750-4909.

**Academic Honesty:** All students are expected to maintain academic honesty. **All submitted work must be your own and must be written in your own words.** All students should be familiar with the university policies and procedures concerning academic honesty as detailed in the university catalog. An online version of these policies and procedures can also be found at: http://lynx.csusm.edu/policies/procedure_online.asp?ID=187