Class Syllabus; Fall 2017
CHE 452L.020; Thurs. 2:00-4:50
452L.021; Thurs. 11:00-1:50
Comprehensive Biochemistry I Laboratory

<table>
<thead>
<tr>
<th>Name</th>
<th>Dr. Michele Harris</th>
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<tbody>
<tr>
<td>Department</td>
<td>Chemistry &amp; Biochemistry</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:mharris@sfasu.edu">mharris@sfasu.edu</a></td>
</tr>
<tr>
<td>website</td>
<td>course information on D2L</td>
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<tr>
<td>Phone</td>
<td>936-468-2485</td>
</tr>
<tr>
<td>Office</td>
<td>Chemistry 104A</td>
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<tr>
<td>Office Hours</td>
<td>M: 8:00-11:00, 1:00-3:00</td>
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<tr>
<td></td>
<td>T: 9:30-11:00</td>
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<td>W: 1:00-3:00</td>
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**CLASS DESCRIPTION:**
1 semester hour, 3 hours of lab per week. Purification and characterization of biomolecules.
Prerequisites: CHE 330/330L or 331/331L (≥C) and CHE 452 or concurrent enrollment.
Required lab fee.

**Text and Materials:**
A laboratory notebook (bound composition book) will be needed. Handouts/reading assignments for lab will be provided via the D2L class page. Check D2L regularly. Each person needs to bring a fine point sharpie and a roll of paper towels.

**COURSE CALENDAR:**  ON SEPARATE PAGE

**GRADING POLICY:**
The point total for the lab (exams, quizzes, and assignments) is a total of 600 point for the semester. Grades are based on the total number of points earned out of 600.

\[A \geq 540; \quad B \geq 480; \quad C \geq 420; \quad D \geq 360; \quad <360 = F]\]

- **Quizzes** will be given almost every week (10 point each for a total of 100 points).
- **Notebook/standard operating procedures/professionalism** is worth 200 points total.
- **The written** report is worth 100 points. [Using a journal format. See links to specific journal format options at the end of the laboratory schedule.]
- **Exam I** is worth 100 points.
- **Exam II** is worth 100 points

Information (in the form of handouts and discussion) will be provided in lab about quizzes, notebook keeping, standard operating procedures, professionalism, oral report and written report. A significant amount of personal study and preparation is required to be successful in this laboratory.
**ATTENDANCE POLICY:**
Attendance of class is mandatory. Three or more absences will result in an ‘F’ for the course. Absences may be assigned to anyone that disrupts class, sleeps in class, or consistently comes in late or leaves early. For ONE *proven* excused absence, arrangements for make up work will be made. Any further absences will count as a zero.

**CLASSROOM BEHAVIOR POLICY:**

*Acceptable Student Behavior:* Classroom behavior should not interfere with the instructor’s ability to conduct the class or the ability of other students to learn from the instructional program (see the Student Conduct Code, policy D-34.1). Unacceptable or disruptive behavior will not be tolerated. Students who disrupt the learning environment may be asked to leave class and may be subject to judicial, academic or other penalties. This prohibition applies to all instructional forums, including electronic, classroom, labs, discussion groups, field trips, etc. The instructor shall have full discretion over what behavior is appropriate/inappropriate in the classroom. Students who do not attend class regularly or who perform poorly on class projects/exams may be referred to the Early Alert Program. This program provides students with recommendations for resources or other assistance that is available to help SFA students succeed.

- Absences may be assigned to anyone that disrupts lab, sleeps in lab, or consistently comes in late or leaves early.
- No personal use of cell phones in class.
- Goggles/safety glasses must be worn at all times.
- NO shorts or abbreviated fashions are allowed.
- Close-toed shoes and pants that completely cover the legs are required.
- NO eating or drinking in the lab.
- Follow ALL departmental safety rules and safety information from instructor.
- **PROFESSIONAL BEHAVIOR IS EXPECTED AT ALL TIMES.**

**ACADEMIC INTEGRITY (A-9.1):**
Academic integrity is a responsibility of all university faculty and students. Faculty members promote academic integrity in multiple ways including instruction on the components of academic honesty, as well as abiding by university policy on penalties for cheating and plagiarism.

**Definition of Academic Dishonesty**
Academic dishonesty includes both cheating and plagiarism. Cheating includes but is not limited to (1) using or attempting to use unauthorized materials to aid in achieving a better grade on a component of a class; (2) the falsification or invention of any information, including citations, on an assigned exercise; and/or (3) helping or attempting to help another in an act of cheating or plagiarism. Plagiarism is presenting the words or ideas of another person as if they were your own. Examples of plagiarism are (1) submitting an assignment as if it were one's own work when, in fact, it is at least partly the work of another; (2) submitting a work that has been purchased or otherwise obtained from an Internet source or another source; and (3) incorporating the words or ideas of an author into one's paper without giving the author due credit.

Please read the complete policy at [http://www.sfasu.edu/policies/academic_integrity.asp](http://www.sfasu.edu/policies/academic_integrity.asp)
Any student found cheating will be subject to the penalties as stated in the Student Code of Conduct handbook; including but not limited to a score of zero on exam, expulsion from the class or expulsion from the University.

**Students with Disabilities:**
To obtain disability related accommodations, alternate formats and/or auxiliary aids, students with disabilities must contact the Office of Disability Services (ODS), Human Services Building, and Room 325, 468-3004 / 468-1004 (TDD) as early as possible in the semester. Once verified, ODS will notify the course instructor and outline the accommodation and/or auxiliary aids to be provided. Failure to request services in a timely manner may delay your accommodations. For additional information, go to [http://www.sfasu.edu/disabilityservices/](http://www.sfasu.edu/disabilityservices/).

*The instructor will notify the class, in writing, if any changes to the syllabus are needed during the semester.*

**Program Learning Outcomes:**
2. The student will integrate knowledge with critical thinking to solve problems.
3. The student will perform qualitative/quantitative chemical analyses/syntheses using modern instrumentation.
4. The student will articulate scientific information through oral communication.
5. The student will articulate scientific information through written communication.

**General Education Core Curriculum Objectives:** There are no specific general education core curriculum objectives in this course. This course is not a general education core curriculum course.

**Course Objective:** To gain competency in basic laboratory techniques of biochemistry that are needed for the purification and characterization of biological molecules.

**Student Learning Outcomes:** Upon successful completion of this course, the student will be able to demonstrate basic biochemical techniques. The student will have laboratory experience in

- Basic analytical techniques for biochemical applications (pipetting, mass, solution/buffer preparation)
- Theory and application of biochemical techniques with emphasizing on critical thinking and problem solving in a laboratory setting (PLO 2, 3)
- Written and oral communication of literature and laboratory results. (PLO 4, 5)

**Outline of Topics (approximate course time):**
- Introduction/Safety (1 lab period)
- Pipetting (1 lab period)
- Data Analysis (1 lab period)
- Solution and Buffer Preparation (1 lab period)
- Protein Purification (1-2 lab periods)
- Electrophoresis (1-2 lab period)
- Enzyme Kinetics (1-2 lab period)
- DNA Purification and Basic Cloning (1-2 lab period)
# Comprehensive Biochemistry I Laboratory

**Fall 2017 Dr. Harris**

**Course Calendar (tentative)**

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<tr>
<th>Date</th>
<th>Lab Schedule</th>
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<tbody>
<tr>
<td>08/31</td>
<td>Lab introduction/information handout &amp; safety, Lab information for Beer’s Law and pipetting</td>
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<tr>
<td>09/07</td>
<td>Beer’s Law Lab</td>
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<tr>
<td>09/14</td>
<td>Comparison of Proteins in Pepper Plant Varieties</td>
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<td>09/21</td>
<td>Comparison of Proteins in Pepper Plant Varieties</td>
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<td>09/28</td>
<td>Comparison of Proteins in Pepper Plant Varieties</td>
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<td>10/05</td>
<td>Enzyme Kinetics</td>
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<td>10/12</td>
<td><strong>Exam I</strong> Enzyme Kinetics</td>
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<td>10/19</td>
<td>Enzyme Kinetics</td>
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<td>10/26</td>
<td>DNA labs</td>
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<td>11/02</td>
<td>DNA labs</td>
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<td>11/09</td>
<td>DNA labs</td>
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<tr>
<td>11/16</td>
<td><strong>Exam II</strong> DNA labs</td>
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<tr>
<td>11/23</td>
<td>THANKSGIVING BREAK</td>
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<tr>
<td>11/30</td>
<td>Complete rough draft of paper due and peer review</td>
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<tr>
<td>12/07</td>
<td>Biochemistry manuscript due</td>
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**Author instructions:**

*Journal of Biochemistry and Molecular Biology Education:*
[http://onlinelibrary.wiley.com/journal/10.1002/(ISSN)1539429/homepage/ForAuthors.html](http://onlinelibrary.wiley.com/journal/10.1002/(ISSN)1539429/homepage/ForAuthors.html)

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