CORE BIOCHEMISTRY CLASS (FALL 2019)
BCHM 5771

INSTRUCTOR: Marcelo Sousa
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COURSE WEBSITE: The course will be available through Canvas. Class materials will be available for download through this site. In order to comply with federal privacy laws, course grades will ONLY be distributed through the site.

EXAMINATIONS AND GRADING:

Problem sets: problem sets will be administered during the course. The due date for each set will be on the set itself and will be collected at the beginning of class on the due date.
No late problem sets will be accepted.

Exams: There will be a midterm and a final exam. These will be administered in class on the dates shown in the schedule.

Grading: 50% Exams, problem sets and paper critiques
25% Research Proposal.
20% Oral Presentation and critiques
5% Class participation.

INDEPENDENT RESEARCH PROPOSAL: It will be focused on a topic independently chosen by each student. The due dates related to the independent proposal are included in the schedule. Details on the format of the final proposal and the requirements of the intermediate assignments are detailed in a separate document.

STUDENT ORAL PRESENTATIONS: Each student will present a 15-20 minute talk on a paper related to the materials covered in class (it will be assigned by the instructor). The presentation should include a brief introduction and enough background on the experiments presented to ensure that a non-expert audience can follow the presentation.

PAPER CRITIQUES: Papers will be assigned to read and evaluate. Each student will write a one-page critique detailing the main point(s) of the paper and the strengths and weaknesses of the results and conclusions. These critiques will be discussed in class and everyone should be ready to lead the discussion when asked by the instructor.
FALL 2019 -- TOPICS

L1 Molecular Forces
L2 Thermodynamics I
L3 Thermodynamics II
L4 Macromolecular Binding
L5 Protein Structure
L6 Methods focus: binding
L7 Enzymes and kinetics I
L8 Enzymes and kinetics II
L9 Methods focus: Protein Purification
L10 Translation I
L11 Translation II
L12 Methods Focus: Fluorescence-based technique
L13 Protein Folding
L14 Protein Transport
L15 Protein Trafficking
L16 Protein Degradation
L17 Methods Focus: Single Molecule Techniques
L18 The Unfolded Protein Response
L19 Methods Focus: Macromolecular Structure Determinations
L20 Signaling
<table>
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<th>Assignment Schedule</th>
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<td><strong>August</strong></td>
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<td>September</td>
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<td>October</td>
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<td>November</td>
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<td>December</td>
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**Assignments**

- **August 26:**
  - Ethics

- **September 2:**
  - Labor Day
  - NO CLASS

- **September 9:**
  - Ethics

- **September 16:**
  - Ethics

- **September 23:**
  - Translation I
  - Paper Marcelo

- **September 30:**
  - Paper Student 2

- **October 7:**
  - Protein Folding

- **October 14:**
  - Rotation Talks

- **October 21:**
  - Specific Aims Due

- **October 28:**
  - Ethics

- **November 4:**
  - Paper Student 7

- **November 11:**
  - Proposal Due for Student Review

- **November 18:**
  - Student reviews due back

- **December 2:**
  - Proposal Due

- **December 9:**
  - Study Section

**Important Dates**

- **September 2:** Labor Day
- **September 9:** Ethics
- **September 16:** Ethics
- **September 23:** Ethics
- **September 30:** Paper Student 1
- **October 7:** Ethics
- **October 14:** Ethics
- **October 21:** Ethics
- **October 28:** Ethics
- **November 4:** Ethics
- **November 11:** Ethics
- **November 18:** Ethics
- **November 25:** Ethics
- **December 2:** Fall Break
- **December 9:** Study Section

**Exam Dates**

- **November 28:** Exam 1. In class
- **December 9:** Exam 2. In class
CLASS POLICIES:

HONOR CODE: All students of the University of Colorado at Boulder are responsible for knowing and adhering to the academic integrity policy of this institution. Violations of this policy may include: cheating, plagiarism, aid of academic dishonesty, fabrication, lying, bribery, and threatening behavior. All incidents of academic misconduct shall be reported to the Honor Code Council (honor@colorado.edu; 303-725-2273). Students who are found to be in violation of the academic integrity policy will be subject to both academic sanctions from the faculty member and non-academic sanctions (including but not limited to university probation, suspension, or expulsion). Other information on the Honor Code can be found at http://www.colorado.edu/policies/honor.html; http://www.colorado.edu/academics/honorcode/

SPECIAL NEEDS: If you qualify for accommodations because of a disability, please submit to me a letter from Disability Services in a timely manner so that your needs may be addressed. Disability Services determines accommodations based on documented disabilities. Contact: 303-492-8671, Willard 322.

DISCRIMINATION AND HARASSMENT: The University of Colorado Policy on Sexual Harassment applies to all students, staff and faculty. Sexual harassment is unwelcome sexual attention. It can involve intimidation, threats, coercion, or promises or create an environment that is hostile or offensive. Harassment may occur between members of the same or opposite gender and between any combination of members in the campus community: students, faculty, staff, and administrators. Harassment can occur anywhere on campus, including the classroom, the workplace, or a residence hall. Any student, staff or faculty member who believes s/he has been sexually harassed should contact the Office of Sexual Harassment (OSH) at 303-492-2127 or the Office of Judicial Affairs at 303-492-5550. Information about the OSH and the campus resources available to assist individuals who believe they have been sexually harassed can be obtained at: http://www.colorado.edu/sexualharassment

CLASSROOM BEHAVIOR: Students and faculty each have responsibility for maintaining an appropriate learning environment. Students who fail to adhere to such behavioral standards may be subject to discipline. Faculty have the professional responsibility to treat all students with understanding, dignity and respect, to guide classroom discussion and to set reasonable limits on the manner in which they and their students express opinions. Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with differences of race, culture, religion, politics, sexual orientation, gender, gender variance, and nationalities. Class rosters are provided to the instructor with the student's legal name. I will gladly honor your request to address you by an alternate name or gender pronoun. Please advise me of this preference early in the semester so that I may make appropriate changes to my records. See polices at http://www.colorado.edu/policies/classbehavior.html and at http://www.colorado.edu/studentaffairs/judicialaffairs/code.html#student_code

RELIGIOUS OBSERVANCES: Campus policy regarding religious observances requires that faculty make every effort to reasonably and fairly deal with all students who, because of religious obligations, have conflicts with scheduled exams, assignments or required attendance. For this class, I have checked the interfaith calendar and no religious holiday conflicts with the midterms or final exam. Please let me know before the first midterm exam if you have a religious conflict with the tests. See full details at of the university policies at: http://www.colorado.edu/policies/fac_relig.html