Freshmen Seminar in Biochemistry and Molecular Biology

SYLLABUS

**Lecture:** Thursdays from 12:00-12:50 PM at Shepardson 118

**Recitation Sections:** Thursdays from 1:00-1:50 PM

1. Chaoping Chen  
   **Section R01 in MRB 312**  
   Email: Chaoping.Chen@colostate.edu  
   Phone: 491-0726  
   Office: MRB 231

2. Alison Thurston  
   **Section R02 (Yates 308)**  
   Email: Alison.Thurston@colostate.edu  
   Phone: 491-3859  
   Office: MRB 371

**Combined Objectives:**

- To provide information on how to prepare for various careers in biochemistry.
- To provide an overview of the Biochemistry curriculum.
- To encourage participation in activities offered to enrich the undergraduate experience.
- To enhance problem solving and oral communication skills through group activities.

**Lecture Schedule:**

<table>
<thead>
<tr>
<th>Date</th>
<th>Lecture:</th>
<th>Seminar topic:</th>
<th>Recitation:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aug 29</td>
<td>P. Shing Ho, Department Chair</td>
<td>Introduction to the Department and BMB Major</td>
<td>Class overview followed by department building tour: office, reading room, research facilities, and undergraduate resource room (103 MRB).</td>
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<td>(wk1)</td>
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<tr>
<td>Sep 5</td>
<td>Judy Brobst - Career Counselor, College of Natural Sciences</td>
<td>Where do you want to go? Let's get busy.</td>
<td>Meeting with BMB faculty – part I</td>
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<tr>
<td>(wk2)</td>
<td></td>
<td><a href="mailto:Judy.Brobst@ColoState.EDU">Judy.Brobst@ColoState.EDU</a></td>
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<tr>
<td>Sep 12</td>
<td>Marv Paule, Emeritus Professor and Jefferson Science Fellow</td>
<td>Careers in Science and Government</td>
<td>Meeting with BMB faculty – part II</td>
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<tr>
<td>(wk3)</td>
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<td>Sep 19</td>
<td>Aaron Sholders, BMB Key Advisor (<a href="mailto:Aaron.Sholders@ColoState.edu">Aaron.Sholders@ColoState.edu</a>)</td>
<td>the BMB Curriculum</td>
<td>Panel discussion with senior students - going through the BMB curriculum.</td>
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<tr>
<td>(wk4)</td>
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<td></td>
<td><strong>Career Center worksheet due to TA via email by noon</strong></td>
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<tr>
<td>Sep 26</td>
<td>Jim Zakely, Health Professions Advisor</td>
<td>Important Information for Pre-Med and Pre-Vet students</td>
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<tr>
<td>(wk5)</td>
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<td></td>
<td>Meeting with BMB faculty – part III</td>
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Oct 3 (wk8) **Recitation: construct-and-instruct** – students in small groups will build an item with Lego pieces and write instructions to describe the item and on how to make it. No pictures please.

**Special Lecture: Azin Kheirandish**, a MBM alumna now a MD student at University of Colorado School of medicine  
**Seminar topic:** the journey from a BMB major at CSU to a MD student

Oct 10 (wk7) **Lecture:** Jessica Prenni, Director of Proteomics and Metabolomics Facility  
**Seminar topic:** University Core Facility: Mass Spectrometry based Applications for the Study of Proteins and Metabolites

**Recitation:** construct-and-instruct continued – **Typed instructions are due to your recitation instruction via email by 11 am.** A different group builds up the subject following the provided instruction. Students then come together to discuss and revise the instructions.

Oct 17 (wk8) **Special Location:** Morgan Library Computer Classroom 173

**Morgan Library Tutorial by Michelle Wilde**

12:00-12:50: R01 recitation students  
1:00-1:50: R02 recitation students

**No recitation today; both periods are needed for the Library Tutorial**

Oct 24 (wk9) **Lecture:** Norm Curthoys, Professor, Colorado State University  
**Seminar topic:** Careers in Academia

**Recitation:** Meeting with BMB faculty – part IV

Oct 31 (wk10) **Lecture:** Leslie Ross, Quest Diagnostics  
**Seminar topic:** Careers in Genetic Counseling

**Recitation:** Students work in groups to prepare a 20-min Powerpoint slide show on the selected debate topic, to identify speaker(s) who will represent to the class, and to gather supporting materials.

Each individual student turns in **three typed research points (either pro or con)** on the selected debate topic with primary references. **Due to your recitation instructor via email by noon.**

Nov 7 (wk11) **Lecture:** Robert Ellis, Director of Biosafety  
**Seminar topic:** Biosafety and Biosecurity in Research

**Recitation:** Group debate on the chosen topic - I  
**Faculty meeting summary due to TA via email by noon**

Nov 14 (wk12) **Lecture:** Ron Arndt, Director of Northern Colorado Regional Forensic Laboratory  
**Seminar topic:** From the laboratory to the courtroom: Forensic analyses of the crime

**Recitation:** Group debate on the chosen topic - II

Nov 21 (wk 13) **Jill Livengood, InViragen**  
**Seminar topic:** Careers in Biotechnology

**Recitation:** Group debate on the chosen topic - III
Nov 28  Thanksgiving Break - No class or recitation

Dec 5  Lecture: Jennifer Nyborg, Professor, Colorado State University  
Seminar topic: Ethics in Biomedical Research  
Recitation: Student discussion on ethical dilemmas.  
Final Career Plan due to TA via email by noon

Dec 12  Panel Discussion on Graduate Schools – a student’s perspective with various majors  
Recitation: class survey

Assignments:

Attendance (30%) is required at all BC192 activities; you won’t learn if you’re not there!

Participation in class activities (15%): This class is designed to get you involved in activities that will let you make friends with other Biochem majors, to give you opportunities working in groups with your fellow students, to learn about researching a topic and preparing arguments for or against a particular point of view on that topic, and to begin to seriously think about your career goals. Participation is required to meet these goals.

Career worksheet (10%). Complete the Career Center worksheet by researching the CSU career center website. Due to TA via email by noon on September 19th.

Written points (either pro or con) on the selected debate topic (10%): Each student individually turns in three typed research points with primary references. Due on Oct 31st to your recitation instructor via email by noon.

Faculty meeting summary (10%): Upon completion of meetings with your selected faculty, each student will write a summary on three faculty members whose research interests you the most. Describe briefly in your own words (3-5 sentences) the significance of each research topic. Due on November 7th to TA via email.

Career Plans Paper (25%): Each student will write a two-page, typed, double-spaced paper (1” margin all around) describing your current career plan. This should emphasize your background that led to your majoring in Biochemistry. Also a discussion should be included of material covered in class that helped you to formulate your career plans and describe the activities you plan to pursue at Colorado State University that will assist you in achieving your goal. Students must use Microsoft Word (or save the document in Word format). Due on Dec 5th to TA via email by noon.

Grading:

Traditional letter grades (A to F) will be assigned. The individual class assignments will constitute the percentage of your grade as indicated above. Written assignments will be graded for spelling and grammar, as well as content and organization. Attendance for both the lecture and recitation are mandatory. After the first unexcused absence, a student's final grade will be reduced by one letter grade for every additional unexcused absence.

Ram Pride – Student Integrity:

Any unauthorized assistance on academic work will NOT be given, received and used.