Instructor: Cliff Berkman
Class meetings: FULM 432 Mon/Wed/Fri 11:10 -12:00 pm
Office Hours: Mon/Wed/Fri 12:00-1:00pm
Email: cberkman@wsu.edu

Recommended Texts:

- An Organic Chemistry textbook and a Biochemistry textbook
- The Grant Application Writer’s Workbook:
  http://www.grantcentral.com/workbook_nih_sf424_shortened.html

Grading Policy: Class grades will be based on:

- 2 Exams
- Research Proposal (2 pages, 3 sections)

Grades will be assigned according to the general scale below.

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<tr>
<th>Grading Scale</th>
<th>Percentage</th>
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<tr>
<td>A</td>
<td>≥ 90%</td>
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<tr>
<td>B</td>
<td>≥ 80%</td>
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<td>C</td>
<td>≥ 70%</td>
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Exam 1 (Due March 18 in class) 50 pts
Exam 2 (Due April 29, 5pm) 20 pts
Research Proposal
  - Specific Aims 15 pts
  - Significance 8 pts
  - Innovation 7 pts

TOTAL 100 pts

Relevant Class Information:

1. Lecture slides and related course information will be posted on the course website through Blackboard Learning (https://learn.wsu.edu). Please check it periodically.

2. Take-Home Exam 1 will be given March 1st and is due March 18th.
   Take-Home Exam 2 will be given March 18th and will be due April 29th.

3. The Research Proposal draft (approximately 2 pages) will be structured according to the following sections. The proposal may represent your current research project or one that you would like to pursue. Ideally, this exercise will provide you with a working draft of your Written Proposal as part of the requirements to advance to Ph.D. candidacy in the Department.
   a. Specific Aims (1 page) due April 19th in class. Peer review of Specific Aims will be occur in class the week of April 22nd.
   b. Significance (0.5 page) due April 26th in class
   c. Innovation (0.5 page) due April 26th in class
### Tentative Topics

**Week 1** (week of Jan 7)  
- *Introduction & Lead Discovery*

**Week 2** (week of Jan 14)  
- *Lead Modification*

**Week 3** (week of Jan 21)  
- *QSAR*

**Week 4** (week of Jan 28)  
- *Drug-Receptor Interactions*

**Week 5** (week of Feb 4)  
- *Interactions with Enzymes & DNA*

**Week 6** (week of Feb 11)  
- *Drug Metabolism*

**Week 7** (week of Feb 18)  
- *Prodrugs*

**Week 8** (week of Feb 26)  
- *Solid-Phase, Combinatorial, and Parallel Synthesis*

**Week 9** (week of Mar 4)  
- *Fragment Based Drug Discovery (Phil Cox)*

**Week 10** (week of Mar 11)  
- **SPRING BREAK**  
  - **SPRING BREAK**  
  - **SPRING BREAK**  
  - **SPRING BREAK**

**Week 11** (week of Mar 18)  
- *Proposal Writing – Introduction and the Anatomy of a Research Proposal*

**Week 12** (week of Mar 25)  
- *Proposal Writing – Specific Aims*

**Week 13** (week of Apr 1)  
- *Proposal Writing – Specific Aims*

**Week 14** (week of Apr 8)  
- *Proposal Writing – Significance*

**Week 15** (week of Apr 15)  
- *Proposal Writing – Innovation*

**Week 16** (week of Apr 22)  
- *In-class peer-review of Specific Aims for research proposals*