Chemistry 36 B Spring 2004
Syllabus

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Course Description- Chemistry 36B is the biological option of organic chemistry laboratory. The course aims to teach general organic chemistry laboratory principles and theory with a biological focus.

Text Books: You are required to purchase an Organic Laboratory Lab Guide and Laboratory Notebook.

Assignments: The laboratory assignments for Chem36B are different from Chem 36. Check the schedule distributed in Lab. Place the schedule in the flap of the back cover of the Organic Lab Guide.

Technique Experiments - Changes have been made to the technique experiments for Chemistry 36B. These changes can be found at the Chemistry 36 Web site on the Chemistry 36B page. The changes provide a more biological connection to the techniques and allows for a more group oriented approach.

http://courses.chem.psu.edu/chem36/HTML/Chem36B.html

Project – In lieu of synthetic experiments, students will work on team projects. Your team will be assigned one of four projects, and as a team you will work on this project for 10 laboratory periods. Each group is required to meet with Dr. Bortiatynski to present a research plan. The research plan must include a hypothesis, and a detailed description of the planned experiments as well as a description of the analyses that will be used during the project. After meeting with Dr. Bortiatynski, each team will be required to submit a rough draft of a proposal for their project. The proposal will include an introduction, a general procedure, a list of materials, and a work schedule for each team member. The proposal will be reviewed and graded by your TA. Your group will then meet with your TA to discuss changes that need to be included in the final draft of the proposal. You cannot begin work on your project until your TA has approved the final draft of your proposal.

During the project each team will be required to turn in two mid semester progress reports. The first report will contain the most recent version of the introduction and the procedure sections of your final research report. The second report will summarize the work each team has accomplished to date, summary of results to that point, and all future laboratory work.
At the end of the project each team will present a poster to their peers and faculty at a joint poster session with Chemistry Chem 36H and Chem 15. Each team will be required to write a formal report (one per team) of their group project, this report will be due on the final week of lab. More information about each of these assignments will be provided to you during the semester.

**Thought Questions** – During the project portion of the course you will be asked to answer one thought question at the beginning of each laboratory class for five of the last 10 class meetings. These questions will be based on a journal article that will be required reading for each of the designated class periods. Each article will be a key article for each of the projects being run within your section. Questions will be answered as a group, within your project teams.

TA Evaluations: See Page ____ of Lab Guide

**Peer Evaluation:** You will be asked to anonymously evaluate the other members of your research group. This evaluation is a word document that is found on the Chem 36B web page. The completed form can either be emailed or given to the student’s TA. All information in the evaluation will be kept strictly confidential between the TAs and the instructor. The student evaluation is designed to provide valuable information concerning each student’s contribution to the research project.

**Grading**

**Technique Experiments:**
- Recrystallization/Melting Points: 20 Bonus Points (if exceptional)
- Distillation/Boiling Points: 200 points
- Liquid/Liquid Extraction: 200 points
- Thin-Layer Chromatography: 300 points
- Column Chromatography: 300 points

**Project Assignment**
- Key Word Search: 25 points
- Copies of Articles: 25 points
- Article Review: 100 points
- Proposal: 150 points
- Thought Questions: 100 points (25 points each)
- Poster Presentation: 200 points
- Progress Reports: 100 points (50 points each)
- Final Report: 300 points

**Quizzes**
- Spectral Unknown: 100 points
- TA Evaluation: 100 points
- Peer Evaluation: 80 points

**Total Points:** 2400 points