Course Syllabus
ORGANIC CHEMISTRY II LAB
Chemistry 2325

Dixie State College of Utah
Fall 2009, section 1

Professor: **Sarah Morgan Black**
Office: **SCI 121**
Office hours: **1:00-1:30 pm, 7:00-7:30 pm Mon, Wed**
Phone: **(435) 767-1248**
E-mail address: **smblack@dixie.edu**
When & where class meets: **Thurs, 2:00-4:50 pm in SCI 201**

Course description and objectives

This course is the second of two semesters of organic chemistry laboratory, and is designed to give you hands-on experience with the techniques, principles, and reactions of organic chemistry. You should have successfully completed Chem 2315, and should be concurrently enrolled in Chem 2320 unless you have already completed it.

The lab experiments have been designed to correlate with the material covered in the lecture course, and you will be expected to apply knowledge such as reactions, mechanisms, and properties of organic molecules learned in Chem 2310 and 2320 to the procedures in Chem 2325. However, you will receive a grade for each course independently.

When you finish this class, you should be able to:

- Practice safe handling and proper disposal of laboratory chemicals.
- Perform necessary calculations such as stoichiometric amounts of reagents and % yields.
- Accurately and objectively record experimental procedures and data and draw appropriate conclusions from experimental results.
- Perform and explain the principles behind operations such as filtration, rotary evaporation, recrystallization, liquid-liquid extraction, TLC analysis, column chromatography, melting point determinations, and distillations, and obtaining IR spectra.
- Synthesize organic compounds by running a reaction, isolating, purifying, and characterizing the product(s).
- Demonstrate an understanding of the thought processes involved in organic synthesis by analyzing results from a virtual laboratory program.
- Identify unknown compounds using IR and NMR spectra, melting and boiling points, and chemical tests.
- Perform chemical demonstrations suitable for an audience of elementary school children.

Required Materials

1) Laboratory Manual for Chem 2315 and Chem 2325 by Sarah Morgan Black

The Laboratory Manual is online at http://cactus.dixie.edu/smblack/chemlabs. You will need to print out the labs and bring them to class. You should purchase a three ring binder (or something similar) in which to put the labs that you have printed out; you will need to refer back to them later. The course schedule is also located on the course website.

2) Student Lab Notebook (with carbon tear-out pages)

The Student Lab Notebook and goggles are available from the Dixie College Bookstore. The lab notebook has carbon pages which you will tear out and turn in for grading, and may also be used both semesters (unless you use up all of the pages).

3) Splash-proof goggles

To qualify as splash-proof, your goggles must fit tightly to your face and cannot have any holes (except splash-proof vents).

All other materials, including equipment and chemicals, are provided using your lab fee. On the first day of lab, you will be issued a drawer with equipment worth considerably more than your lab fee – you are responsible for the contents, and will be checked out at the end of the semester.

Safety

I take safety issues very seriously. Goggles must be worn whenever chemicals are in use by anyone in the lab. Shorts and sandals are not permitted, and skirts and dresses are discouraged. Gloves and aprons are available, and are also recommended to protect your clothes and hands in case of a spill. Long hair should be tied back, and long, loose sleeves should be avoided. Do not take **any** chemicals or equipment out of the lab. ***You are responsible to follow instructions and to use common sense and your knowledge of chemical principles to ensure the safety of yourself and those around you.***

Grading

Your grade will be based upon your preparation for lab, your completion of the experiments, your written record of the lab, and your understanding of the principles behind what you have done, as demonstrated by your lab write-up, the end-of-lab questions, and the final exam.

Before each lab, you should read the lab and any other portions of the lab manual as you are directed in the lab. You should then write an introduction in your notebook, perform any necessary calculations as directed, and answer the pre-lab questions on-line.

During the lab, you will write a lab report containing procedures that you performed and observations that you made during the experiment, as well as interpretations of these observations. This record will be used to judge whether you have completed the experiment, and your ability to properly record your procedures and observations. Even if your experiment is unsuccessful, you can still obtain full credit for performing the lab by getting my permission to join another student and performing the remaining steps together. During some experiments, you will work in teams of two; both students are required to keep and turn in a separate lab report. At the end of the lab we will have a brief discussion of the results that the class obtained.

At the end of the course, a final exam will be given. It will be in a written answer format, and you will be able to use your lab notebook (but not the lab manual) for reference. However, this won't be of much help if you don't understand what you have done during the semester.

Understanding what you are doing in the lab is even more important than getting correct results. If you only succeed in blindly following instructions, you will not have fulfilled the objectives for this course. I will judge your understanding by your interpretation of observations, your conclusions, the answers to the end-of-lab questions, and the final exam. The lab can be a great place to make connections between concepts taught in class and how they actually look and work in real life; take full advantage of this opportunity to apply the concepts that you have learned in lecture (and in previous courses) to get an in depth understanding of how organic chemistry works.

Labs will generally require the entire 3 hour lab period; do not expect to be able to leave early. Also, this lab is only a one-credit course; however, you will need to put in some time outside of the lab in order to earn an A or B grade. Science labs in colleges all over the US generally require more work than the amount of credit implies – get used to it! To lighten this load, exercise the discipline needed to prepare well – if you know what you're doing, you will get done faster often be able to work on your conclusion and questions while waiting for other classmates to finish.

Summary of points for the course:

Pre-lab questions	15%
Lab reports	45%
End-of-lab questions	25%
Final Exam	15%

Letter grades will be assigned using the percentage scale below.

A	93.0 –100
A-	90.0 – 92.9
B+	87.0 – 89.9
B	83.0 – 86.9
B-	80.0 – 82.9
C+	77.0 – 79.9
C	73.0 – 79.9
C-	70.0 – 72.9
D	50.0 – 69.9
F	0 – 49.9

Other Useful Stuff

Dmail: Important class and college information will be sent to your Dmail account. This information includes your DSC bill, financial aid/scholarship notices, notification of dropped classes, reminders of important dates and events, and other information critical to your success in this class and at DSC. All DSC students are automatically assigned a Dmail account. If you don't know your user name and password, go to www.dixie.edu and select "Dmail," for complete instructions. You will be held responsible for information sent to your Dmail email, so please check it often.

Important DSC dates to remember (for course dates, see schedule on the last page).

Mon, Aug 24	Classwork Starts
Wed, Aug 26	Last Day to Add Without a Signature
Mon, Aug 31	Drop fee begins ($10 per class)
Mon, Sep 7	Labor Day
Tue, Sep 8	$50 Late Registration/Payment Fee
Mon, Sep 14	Pell Grant Census
Mon, Sep 14	Last Day for Refund
Fri, Sep 18	Last Day to Add Classes
Wed, Oct 14	Mid-Term Grades Due
Sat, Oct 15	Semester Break
Mon, Oct 19	Last Day to Drop/Audit Classes
Fri, Nov 13	Last Day for Complete Withdrawal
Tue, Nov 17	Career Day
Thu, Nov 25	Thanksgiving Break
Fri, Dec 11	Classwork Ends
Fri, Dec 14	Final Exams

College resources: Several college resources are available to help you succeed. Check out the links for each one to get more information.

If you need help understanding the content of your courses, go to the Tutoring Center located in the Browning Learning Center, Room 105. There is a schedule of what courses have tutors at what times outside the door. You can also visit them online at http://dsc.dixie.edu/tutoring/

If you need help writing papers, go to the Writing Center in the Browning Learning Center, Room 105. You can also visit them online at http://new.dixie.edu/english/dsc_writing_center.php

If you need to use a computer to do schoolwork on campus, go to the Computer Center in the Smith Computer Center or the Library basement.

If you are assigned to take a test in the Testing Center, go to the Browning Learning Center on the upper floor. You can get information on their website at http://new.dixie.edu/testing/

The Library has all kinds of information and resources. Visit the Val Browning Library or go to the library website at http://library.dixie.edu/

Classroom expectations: It is the responsibility of an instructor to manage the classroom environment to ensure a good learning climate for all students. This means not talking when the teacher is talking, following instructions, and speaking and acting respectfully to the professor and fellow students. If your behavior is disruptive, I will first let you know verbally that you are behaving inappropriately. If it continues, I will send you written notice that your behavior must change. As a last resort, I will drop you from the class. For more details, please see the disruptive behavior policy at: http://www.dixie.edu/humanres/policy/sec3/334.html

College approved absenses: Dixie College Policy explains in detail what needs to happen if you anticipate being absent from class because of a college-sponsored activity (athletic events, club activities, field trips for other classes, etc. Please read this information and follow the instructions carefully! The policy can be found at: http://www.dixie.edu/humanres/policy/sec5/523.html

Academic honesty: I believe that most students are honest, and I don't want to punish everyone for the few that aren't. However, I will not tolerate cheating, and if I discover that it has occurred, a zero grade will be given for that assignment or exam. Repeated or aggravated offenses will result in failing the course.

Any time you take credit for work you did not do, you are cheating. This includes getting the answers to study questions from someone else, copying information from a library or internet source and presenting it as if it were your own words (plagiarism), looking at someone else's answers on an exam, and asking someone who has already taken a test about what questions it contains.

I have tried to design assignments and exams to minimize the temptation to cheat, but it is not my job to prevent you from cheating. If you are successful, it doesn't mean that you "beat the system." It means you violated the student code of conduct and forfeited your integrity, whether or not you are caught. You will pay the price, sooner or later. Having served on the committee that disciplines students for academic dishonesty, I can promise you that it is better to fail an assignment or even a class than to cheat and lose the chance to continue your education. (See DSC Policy 34.1.1-4).

Disability Accommodations: If you are a student with a medical, psychological or a learning difference and requesting reasonable academic accommodations due to this disability, you must provide an official request of accommodation to your professor(s) from the Disability Resource Center within the first two weeks of the beginning of classes. Students are to contact the center on the main campus to follow through with, and receive assistance in the documentation process to determine the appropriate accommodations related to their disability. You may call (435) 652-7516 for an appointment and further information regarding the Americans with Disabilities Act (ADA) of 1990 per Section 504 of the Rehabilitation Act of 1973. Our office is located in the Student Services Center, Room #201 of the Edith Whitehead Building.