

Course Syllabus
ORGANIC CHEMISTRY II
Chemistry 2320, Section 1

Dixie State College of Utah
Fall 2010

Course instructor: **Sarah Morgan Black**

Office: **121 Science Building**

Office hours: **1:00-1:30 pm, Mon, Wed, Fri**

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When class meets: **Mon, Tues, Wed, Fri from 12:00 to 12:50 pm in Udvar-Hazy, Room 243**

Course description and objectives

Chemistry 2320 is the second of two semesters of organic chemistry offered at Dixie State College. You should also be registered for the accompanying lab, Chem 2325, unless you have taken it previously. You should have successfully completed Chem 2310 and 2315, which will serve as the foundation for our continued study of organic chemistry.

The organic chemistry series will prepare you for upper division course work in pre-professional, science, and engineering programs. It will also help you to have a greater appreciation for the organic chemistry that happens all around (and inside) you every day.

When you are finished with this course, you should be able to:

- Classify organic compounds and represent them appropriately using line structures. This semester will review alkanes and alkyl halides, and introduce alkenes, alkynes, alcohols, ethers, aromatic rings, carboxylic acids, ketones, aldehydes, carbohydrates, amines, esters, amides, acid chlorides, anhydrides, and nitriles.
- Explain the structures (hybridization, geometry, and polarity) and compare physical properties (boiling point, melting point, solubility, conformations, and stability) of organic compounds.
- Use the rules of nomenclature to give correct names for organic compounds, draw correct structures that correspond to a name, and correctly use and recognize common names.
- Use principles of stereochemistry to locate stereocenters and label stereoisomers, identify chiral compounds, give stereochemical relationships between molecules, use Fischer projections, and identify stereochemical results of a reaction.
- Use IR and NMR spectroscopy to characterize and identify organic compounds.
- Give starting materials, reagents, and products for reactions of organic compounds.
- Use mechanistic principles to recognize nucleophiles, electrophiles, acids, and bases, and correctly draw the mechanisms of selected reactions; also use mechanisms to predict the regio- and stereoselectivity of products.
- Create multi-step syntheses by combining reactions.

Required Materials

- 1) Organic Chemistry, sixth edition, by L. G. Wade (optional) *or*
Organic Chemistry with Biological Applications, by John McMurry (optional)

This course is based on Organic Chemistry, sixth edition, by L. G. Wade. The other organic chemistry section is using a textbook which focuses on biological applications by McMurry. You are not required to purchase either one, and you may do reading assignments from either textbook. The reading assignments listed online give sections from Wade, but you are encouraged to use the table of contents or index to find appropriate pages in McMurry. You may also use any other organic chemistry textbook, including those given in the list in the reading assignment instructions.

- 2) Learning Guides and Homework by Sarah Morgan Black

The other materials that you will need for class are available online at the course web site:

<http://cactus.dixie.edu/smblack/chem2320>

For each chapter you will find a Learning Guide, Homework, Nuggets of Knowledge, a Reading Assignment, and Objectives. You must print out the Learning Guide for each chapter before the lecture begins for that chapter. You must print out and do the Homework for each chapter before it is due. Use the Reading Assignment (if reading Wade) to complete the assignment, but you do not need to print it out and turn it in. The Nuggets, Learning Guide Key, and Objectives are available for you to use at your discretion. You will also find summary sheets for important concepts which you will need to refer back to all year.

- 3) Molecular models

You will also need a set of molecular models which can be purchased at the bookstore; please bring your models to class each day, as you will not know in advance when they will be needed.

Grades

Your grade will be based on your performance on homework, reading assignments, chapter quizzes, exams, and the final exam. Each category is weighted as shown below. After each exam, I will provide you with a print-out showing how you are doing in the class; also, please feel free to check your current grade with me at any time – just send an e-mail and I will send a copy of your current grade sheet.

Late homework and reading assignments, quizzes, and exams will be accepted, but you will lose 10% of the total possible points. The only exception is the final exam, which must be taken at the time given in the schedule unless arrangements were made previously. Late homework and reading assignments must be completed before the exam in which that chapter is covered. Under special circumstances, these penalties may be waived at my discretion.

Learning guides (0%) - It is absolutely necessary that you attend class every day. You might be able to miss a day here or there for an emergency, but more than that and you will get in trouble. However, I will not take attendance, and you will not be specifically penalized for not attending. If you miss class, it is your job to obtain the information that you missed.

Homework (20%) – Working problems is time consuming, but it is the only way to master organic chemistry. You are encouraged to work with other class members on homework, but do not copy their answers, and do not use past years' homework assignments or the answer keys. This constitutes cheating!

To receive credit, you must print out and complete the homework problems for each chapter. Homework assignments are due during the first 10 minutes of class on the day after we finish the lecture for each chapter, and are worth 20 points. Ten points will be awarded for completing all of the problems, and the other ten points will come from problems which I will select to grade. Your lowest homework score will be dropped.

I will grade your homework the day it is turned in, and put it in the box by the next morning with the key so that you can catch your mistakes before you take the quiz. This is a significant learning opportunity, so make sure to take advantage of it!

Reading (10%) – You are not required to read all of the textbook that accompanies this course. However, you should take responsibility to use the textbook as a resource to clear up questions, get more details about something you are confused about, and so on.

To receive credit, you must read 5 pages from each chapter, chosen from the reading list for that chapter, take notes as you read, and write a response paragraph. See the course website for further instructions. You may substitute 5 pages from other organic chemistry books in the library, given in a list on the course website. Reading assignments will be due during the first 10 minutes of class on the day after we finish the lecture for each chapter (at the same time as the homework), and are worth 10 points. Your lowest reading score will be dropped.

Chapter quizzes (25%) – A 30 minute quiz worth 30 points will be given in the testing center starting when it opens on the day after the homework and reading assignments are due, and ending when the testing center closes on the following school day (if that day is a Fri, the quiz will also be available on Sat, but not Sun). If you are unable to take the quiz on time, you must see me to take it late. Your lowest quiz score will be dropped.

After the quizzes are graded and returned, you may discuss what you missed with me for half credit back. You should be prepared not only to supply the correct answer but to answer questions about the concept being tested. Try to correct each quiz before the exam which includes that chapter.

Exams (35%) – Four exams worth 100 points each will be given in the testing center for two school days following the completion of the quiz for the last chapter being covered (if the last day is a Fri, the exam will also be available on Sat, but not Sun). Exams usually cover three chapters, and contains some multiple choice and some written answers. There is no time limit for the exam. If you are unable to take the exam on time, you must see me to take it late. No exams will be dropped.

Final exam (10%) – The final will be held in the classroom on the date given in the schedule. We will be using the American Chemical Society standardized final exam for organic chemistry. It is comprehensive of the entire year. We will have some preparation during the last few days of class.

Summary of points for the course:

Category	Points possible	Number dropped	Percentage of final grade
Homework	20 pts per chapter	1	20%
Reading assignments	10 pts per chapter	1	10%
Quizzes	30 pts per chapter	1	25%
Exams	100 pts per exam	0	35%
Final Exam	100 points	0	10%

Letter grades will be assigned based on % of points earned on the scale shown below, which will reflect the weighted sum of the percentages you earn in different categories.

Grade	% of points
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 - 76.9
C-	70.0 – 72.9
D	50.0 - 69.9
F	0 - 49.9

How to Succeed in this Course

I am concerned that too many students are still relying on memorizing the material before quizzes and exams rather than truly learning it. Continuing this strategy during the second semester will likely result in even A students crashing and burning on exams and the final. It is your responsibility to change your learning habits. Which of the following do you need to work on?

1. Come to class prepared every day, having spent 5-10 minutes previewing the material.
2. Use class time to learn, thinking about what you are writing as you fill in the learning guide, doing the practice problems, and asking intelligent questions – not just taking notes of things you plan to actually learn later.
3. Review the learning guide as soon as possible after class, filling in things you missed and going over things you didn't quite get the first time until you understand it, using other resources if needed.
4. Work homework problems as soon as we have covered them in class, using them to test and improve your understanding, not just find the right answers. Check your answers with other students, but don't change your answer until you understand why you went wrong. Getting help understanding the problems is ok, but copying answers is not!
5. Use the reading assignments to improve your understanding, fill in gaps, and answer questions that you may still have.
6. Check all of the homework problems against the key (not just the graded ones) to find out if there's something you've misunderstood before you take the quiz.
7. Use active study techniques to solidify your knowledge before taking quizzes and exams (not just look over the material).
8. Go through your graded quizzes and exams carefully to figure out what you missed.

You are starting the semester with a clean slate. Consider your study habits from the previous semester and resolve to improve if you found yourself cramming. Every semester there are a few students who did poorly the first semester but get it together the second semester and improve significantly. This could be you!

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 23	Classwork starts
Wed, Aug 25	Last day to add without a signature
Mon, Aug 30	Drop fee begins (\$10 per class)
Mon, Sep 6	Labor Day
Tue, Sep 8	\$50 Late registration/payment fee
Mon, Sep 13	Last day for refund
Mon, Sep 13	Last day to drop without a "W" grade
Fri, Sep 17	Last day to add classes
Fri, Oct 1	Last day to apply for graduation
Thurs, Fri, Oct 14-15	Semester break
Mon, Oct 18	Last day to drop or audit classes
Fri, Nov 12	Last day for complete withdrawal
Tue, Nov 16	Career Day
Wed-Fri, Nov 24-26	Thanksgiving break
Fri, Dec 10	Last day of classes
Mon-Fri, Dec 12-16	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 first floor of the Career/Financial Aid Building. 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 absences: 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, and you will not be allowed to make it up. 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 homework problems 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 cheat and are not caught, 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 "Student Code" <http://library.dixie.edu/policies/studentcodesectionfour.pdf> page 8).

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 next to the Testing Center in the first floor of the Career/Financial Aid Building.