

# Chemistry 12A-12B Information Sheets

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## REQUIRED MATERIALS:

**Lecture:** *Organic Chemistry*, 8th ed., Paula Yurkanis Bruice, Pearson, 2017

**Laboratory:** *Understanding the Principles of Organic Chemistry: A Laboratory Experience*, Pedersen & Myers, Cengage, 2011.

Bound laboratory notebook with numbered, duplicate pages

Protective eye wear and apron must be used in the laboratory **at all times** as required by California State law.

## RECOMMENDED MATERIALS:

*Preparing for Your ACS Examination in Organic Chemistry*  
(Ordering information will be discussed early in the semester)

## WHAT TO EXPECT FROM CHEM 12A-12B

Chemistry 12A-12B is a demanding year-long organic chemistry course. There is a lot of material to learn, and substantial effort on both of our parts will be necessary. Although it may seem that organic chemistry is the ultimate test of one's ability to simply memorize reactions, this is not so. In fact, one of the important goals to have in Chem 12A-12B is to demonstrate that by developing command of a relatively small set of basic concepts and reaction types, you will be able to understand a large number of organic reactions. Although learning these essential principles will be challenging, my hope is that you will see the beauty and elegance of organic chemistry when the relationships among these principles are realized and you begin applying them creatively in broader situations.

The textbook will serve as the main source of factual material for which you will be responsible. You are responsible for reading the text carefully before coming to class. Do the reading with a pencil and paper, and attempt all in-chapter problems as you arrive at them. Write down questions and points that need clarification and share them in class.

Although no homework will be collected, you are advised to do as many end-of-the-chapter problems as you can, as well as the suggested online problems. Answers with explanations are available in the Study Guide, a copy of which is available for library use only in Doyle Library. I cannot emphasize enough that you must give each problem a good effort before consulting the Study Guide for an answer. If you just read the problems then check the answer, the answer will seem reasonable and you will get a false sense of security about your knowledge of the material.

All of the material in this course builds on mastery of previous topics, so it is very important that you do not fall behind. Please TALK TO ME early if you are having problems or are uncertain how to approach any aspect of the course.

## EXAMS AND GRADES

### Lecture Portion

There will be three **semester exams** and a comprehensive standardized **final exam**. The scheduled times for the exams are indicated in the separate calendar handout. There will be NO make-up examinations given. Confirmed illness will be handled on an individual basis. On each exam you are responsible for all textbook assignments, lectures and lab assignments to that date. A superior final exam score may be used to replace any one low score of the three semester exams.

### Laboratory Portion

In grading your laboratory performance, a major emphasis will be on your ability to keep a meaningful laboratory notebook and to demonstrate your understanding of the practical principles being explored. The description of what is expected from a good laboratory notebook appears in a separate document.

The format of the **reports** required for most of the experiments appears in a separate document. Unless you have talked to me in advance, missed or late reports will receive a score of zero, regardless of the actual experimental work performed. A student who receives three or more zeroes on lab reports will have their calculated course grade dropped by one letter grade. A student with five or more zeroes on lab reports is likely to fail the course for lack of participation.

#### *Percentage Distribution:*

Examinations	48 %
Laboratory Reports	22 %
Molecule Project	15 %
Final Examination	15 %

#### *Approximate Final Grade Distribution:*

87-100% . . . . .	A
78-86% . . . . .	B
63-77% . . . . .	C
50-62% . . . . .	D
0 - 49% . . . . .	F

**In order to pass Chem 12B with a C, you must pass both the lecture and lab portions of the course. The minimum passing grade is 50% (yes, a D is a passing grade...)**

## THE INTERPRETATION OF LETTER GRADES

The "**A**" **grade** indicates that the student exhibits **mastery** of the details, concepts, vocabulary, and operations of the subject matter. The student displays the potential for significant achievement at the professional level.

The "**B**" **grade** indicates that the student exhibits an **understanding** of the details, concepts, vocabulary, and operations of the subject matter. The student displays the determination and commitment in the pursuit of mastery of the subject.

The "**C**" **grade** indicates that the student exhibits an **awareness** of the details and vocabulary of the subject matter, and the capability of performing the **basic operations**, and possesses an **elementary knowledge** of the principal concepts.

The "**D**" **grade** indicates that the student has **awareness** of the details and vocabulary of the subject matter but **lacks the capability** of performing the basic operations or of understanding the basic concepts. This student can be considered to be at the entry level of the class, and would benefit by repeating the course.

The "**F**" **grade** indicates that the student, due to one or more of the following factors, received no obvious benefit from participation in the class.

Failure to take or pass required examinations	Continued lack of preparation
Distracting or disruptive behavior in class	Disregard of instructions
Failure to submit required assignments	Excessive absences

Please remember that instructors do not **give** grades. Grades are **earned** by the student in accordance with the meaning of each letter grade as described above.

## STANDARDS OF CONDUCT

All students shall adhere to the District Standards of Conduct. Inappropriate behavior in the classroom may result in a referral to the Vice President of Student Services for disciplinary due process.

You are expected to complete all assignments and examinations with **total honesty**. I will take very seriously any incidents that violate the academic integrity policy. Cheating includes (but is not limited to) copying during an exam or quiz, turning in falsified laboratory results (whether or not you completed the lab work), copying directly from another student's lab notebook, aiding another student's dishonesty, etc. Talk to me if you are not sure what constitutes cheating.

Laboratory reports and other assignments must represent your individual effort, unless they are meant to be group projects. You may discuss the material with your fellow students, but the written work must be yours. If you need additional help, seek it from your instructor well in advance of the due date for a particular assignment. **Questions on the day that an assignment is due are not appropriate.**

Students found cheating will earn zero on the assignment in question, and may also be suspended from the course with a grade of "F" on all assigned work during the time of suspension.

## RE-EVALUATION OF EXAMS AND LABORATORY REPORTS

Written material may be re-examined but the request for re-evaluation should not be based on frivolous reasons. In comparing your graded materials with that of other students, any difference is a figment of your imagination unless your work and that of your colleague are both submitted together for consideration.

Please observe the following procedure in submitting the graded work for re-evaluation:

After you get your assignment back from grading, **do not write on it** if you plan to submit it for a re-grade.

All "re-grades" must be submitted to me, **within one week** of the day the graded assignments were returned to you, with a written note explaining what is to be re-graded and why.

Based on the rationale submitted, the entire report/exam will be thoroughly re-evaluated.

The outcome of the re-evaluation may be positive, negative or result in no change in the original score.

## NEATNESS, ORGANIZATION, COMPLETENESS AND ACCURACY

Neatness, organization, completeness and accuracy of assignments are expected. Any work that is sloppy, poorly organized, incomplete or inaccurately done may be returned to the student and a grade of zero may be recorded.

## DELINQUENT ASSIGNMENTS

Assignments must be submitted on dates specified by the instructor. Any assignment turned in within 24 hours of the due date and time will be penalized severely. Absolutely no assignments will be accepted after 24 hours after the due date and time. Prolonged illness will provide the only justification for a deviation from this policy. In such an event, the student assumes responsibility for making arrangements with his instructor for completing and submitting the missed assignments.

## ATTENDANCE

I cannot imagine trying to learn organic chemistry without regular class attendance. I will expect you to attend all class meetings and to come to class prepared.

Attendance in the laboratory is mandatory. You are expected to notify me of any anticipated absences or late/missed assignments. Any undue number of absences may result in being dropped from the course or in a significant reduction of your course grade.

Laboratory instructions, modifications, theoretical concepts and safety precautions will be discussed during the beginning part of the lab period. Your on-time attendance is required in order to perform the assigned laboratory experiment. A student who is tardy may be barred from the laboratory and receive a score of zero for that assignment.

## **SECURITY OF BUILDING AND EQUIPMENT**

A number of areas in the chemistry building will be locked and therefore inaccessible to students at all times. Laboratories shall be locked whenever a regularly scheduled class is not in session, so it is imperative that all books and clothing be removed by the student at the end of each laboratory period.

## **LOCKER CHECK-OUT**

Before you are issued a locker make sure you are in the lab section for which you registered. If you desire to change to another lab section make your request to the lab instructor before checking out a locker.

## **LOCKER CHECK-IN**

If, for any reason, you drop the course after checking out a laboratory locker, you must make an appointment with the Chemistry Lab Coordinator, Bill Cusworth, to check in your locker. The check-in must be performed within one week of your discontinuance of the course or you will be charged a cleaning and check-in fee as well as be charged for any broken or missing equipment. These charges will be turned over to the business office and must be paid at the accounting office. Failure to pay the above-explained fees will result in a hold being placed on all of your grades and transcripts.

## **EMERGENCY EVACUATION PLAN**

In the event of an emergency during class that requires evacuation of the building, please leave the class immediately, but calmly. Our class will meet in the greenspace between Bech, Shuhaw and Baker Halls to make sure everyone got out of the building safely and to receive further instructions. If you are a student with a disability who may need assistance in an evacuation, please see me during my office hours as soon as possible so we can discuss an evacuation plan.

## **ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES**

If you need disability related accommodations for this class, such as a note taker, test taking services, special furniture, use of service animal, etc., please provide the Authorization for Academic Accommodations (AAA letter) from the Disability Resources Department (DRD) to me as soon as possible. You may also speak with me privately during office hours about your accommodations. If you have not received authorization from DRD, it is recommended that you contact them directly. DRD is located in the Bertolini Student Center on the Santa Rosa campus, and Petaluma Village on the Petaluma Campus.

A final note: Health issues (physical and mental) can interfere with your academic success. Student Health Services is there to support you. Details are at [shs.santarosa.edu](https://shs.santarosa.edu).

## STUDENT LEARNING OUTCOMES AND OBJECTIVES

Students will be able to:

1. Propose a synthetic route, predict the mechanisms for each step in the synthesis, and perform the synthesis and purification of a specified product from a list of given starting materials, while following common safety regulations and procedures.
2. Use nuclear magnetic resonance (NMR), infrared (IR), gas chromatography-mass spectrometry (GC-MS), and/or ultraviolet-visible data to elucidate the structures of unknown compounds and known compounds, and evaluate the success of the synthesis of a specific compound.

Objectives:

Upon successful completion of this course, the student will be able to:

1. Name a wide variety of organic compounds.
2. Predict and explain relative physical and chemical properties for a wide variety of organic molecules.
3. Predict the products and describe the mechanisms for a wide variety of organic compounds using fundamental chemical principles.
4. Effectively communicate observations and subsequent conclusions by means of written laboratory reports.