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# Chemistry 30B: Introduction to General, Organic, and Biological Chemistry II

De Anza College

Term: Fall 2024

Section: 27Y

Instructor: Dr. Brophy

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Welcome to the online syllabus for Chem 30B! This course is offered in a hybrid modality during the fall quarter at De Anza College. Asynchronous work will be assigned weekly, and we will meet in person on Friday mornings. Note that the in-person meetings are mandatory.

## Course Description

This class is for students entering the allied health fields. The focus of the second part of Introduction to General, Organic, and Biochemistry is organic and biochemistry. The topics included in organic chemistry are: hydrocarbons, alcohols, thiols, ethers, carboxylic acids, esters, amines, and amides. Various physical and chemical properties of these organic substances will be studied along with nomenclature and structural features. The topics included in biochemistry are: carbohydrates, fatty acids and lipids, amino acids and proteins, nucleic acids and DNA. Various physical and chemical properties of these biological molecules will be studied. A brief introduction to metabolism will also be discussed.

## Dr. Brophy's Course Description

Chemistry 30B provides a general overview of both organic chemistry and biological chemistry. Organic chemistry and biochemistry are both typically presented as year-long upper-division courses that require extensive prerequisite work, and it very exciting and fun to present these topics at a more accessible level. I break this class up into two main sections (with some overlap): we start with organic structure, nomenclature and reactivity and end the class with biomolecules and biological function.

## Non-equivalency Statement

Please note that this course is not equivalent to a full-year organic chemistry course or an upper-division biochemistry course. Confirm articulation with any schools you plan to transfer or apply to.

## Class Meeting Times

| Lecture              |        | School Holidays  |                      |
|----------------------|--------|------------------|----------------------|
| F 8:30 am – 10:20 am | SC1102 | November 11      | Veteran's Day        |
| <b>Lab</b>           |        | November 28 – 29 | Thanksgiving Holiday |
| F 10:30 am – 1:20 pm | SC2210 |                  |                      |

This is a **hybrid** course with both in-person and remote components. The in-person labs are strictly mandatory, and your punctual attendance in both lecture and lab is expected every week. The lecture component will consist of both in-person and asynchronous online content. Any asynchronous online material and activities must be

completed before Friday's lecture meeting. If you cannot attend the in-person meetings, you should not register for this course.

## Course Webpage

The course webpage is through De Anza Canvas. You will be automatically added to the Canvas shell as a student when you enroll in the course. Students on the waitlist do not have access to Canvas. This course webpage is designed to be viewed on a web browser rather than the student app. **Turn on Canvas notifications to receive class announcements, Inbox messages, and comments/feedback on assignment submissions.**

## Community Statement

Every person in this class, regardless of personal history or identity categories, is a welcome and important member of this group. Your experiences are important, and you are encouraged to share them as they become relevant. No person in this group is ever expected or believed to speak for all members of any group(s).

You have the right to determine your own identity, to be called by whatever name you wish, and to be referred to by your pronouns. You have the right to adjust these things at any point. If you find any aspects of facilitation, instruction, subject matter, or program environment that result in barriers to your inclusion, please let me know right away, privately without fear of reprisal. We are all learning. It is my goal to continue learning and improving to support everyone in this class and, by extension, all my current and future students.

## Syllabus Statement

This course syllabus is a contract. Please read it carefully and completely in its entirety before asking me any questions regarding the course schedule, content, requirements, grading, etc. You are expected to adhere to the De Anza College Student Code of Conduct Administrative Policy 5510 at all times. This syllabus is also a living document, and it may be necessary to make minor corrections or changes during the quarter. I will not make major changes to the syllabus except in cases of *force majeure* or following class discussion. **All corrections and changes to this syllabus will be announced through Canvas.**

This class is divided into two separate instructional threads: a lecture portion devoted to the primary course material and a lab period for conducting lab experiments. At De Anza College, the lab and lecture may not be taken as separate courses under any circumstances

## About Your Instructor

### Contact Information

**Instructor:** Dr. Megan Brunjes Brophy

**E-mail:** [brophymegan@fhda.edu](mailto:brophymegan@fhda.edu)

**Real-World Office:** SC1220

**Phone Number:** 408-864-8338 (*not preferred*)

*Please note that **Canvas Inbox** is the most reliable ways to get in touch with me outside of class. I do not reply to messages on evenings and weekends. In general, you can expect a reply from me in 2–3 business days.*

### Office Hours

Office hours are an opportunity for you to come talk to your instructor outside of regular class time. Please bring your homework, notes, reading, or any other assignments. You are welcome to come talk to me about the course, questions that you have about the material or practice problems, and your educational path. Each of my office hours are open to all my students; please come say hi!

| Day | Location | Time |
|-----|----------|------|
|-----|----------|------|

|        |                   |                 |
|--------|-------------------|-----------------|
| Monday | PST Village (S55) | 11:30 – 2:20 pm |
|--------|-------------------|-----------------|

## My Teaching Philosophy

My hope is that every student who takes one of my classes gains an appreciation for the power of chemistry and the beauty of the natural world. It is important to me to design a course that is accessible to students of varying educational, cultural, and socioeconomic backgrounds while maintaining high intellectual, ethical, and academic standards. I strive to reward consistent, sustained effort throughout the quarter, and my goal is for everyone who takes this class to pass with a C so that you can move on to the next stage of your educational or career pathway.

## Required Materials

### Textbook and Online Homework

The primary textbook for this class is *General, Organic, and Biological Chemistry: An Interactice Approach* by Owens, Owens, and Murkowski with MasteringChemistry for online homework. You must register for access through the class Canvas page.

### Molecular Modeling Kit

Many types are available. I like this kit from Duluth Labs, and many dupes are available on Amazon and temu. [https://www.amazon.com/Duluth-Labs-Organic-Chemistry-Molecular/dp/B01N00GAPR?ref\\_=ast\\_sto\\_dp&th=1](https://www.amazon.com/Duluth-Labs-Organic-Chemistry-Molecular/dp/B01N00GAPR?ref_=ast_sto_dp&th=1)

### Lab Manual

The lab procedures for each lab will be posted as PDFs on Canvas. You should bring each lab and bring it with you to class.

### Computer (and printer) access

This is a hybrid course with extensive technological requirements. It is strongly recommended that you have regular and consistent access to a computer with a camera and microphone. You will also need to be proactive in reaching out to technical and support services for any platforms that we use. *Start your work early so that you do not fall behind.*

### GeniusScan or CamScanner

Throughout the quarter, you will turn in handwritten assignments by creating a PDF filed and uploading this file to Canvas. Recommended apps include GeniusScan and CamScanner. Do not use any Adobe apps to turn your assignments in—the files end up being too big for me to read! If I can't open the file you send me, you will receive a zero on the assignment.

### Nitrile Gloves

You must bring nitrile gloves to lab with you. We will discuss PPE in more depth in our first lab sessions.

### Lab Goggles

You must wear lab goggles in lab when we have chemicals or glassware out. The lab goggles must

- Conform to your face
- Have indirect venting
- Carry an ANSI Z87.1 shatter rating

## Supplemental Materials

### Calculator

Chemistry 30B is a “math-lite” chemistry course; however, we will occasionally perform mathematical tasks. A scientific calculator with natural log functionality is necessary and sufficient for this class. If you have already purchased a graphing calculator for another class, you may use it on exams and quizzes; however, we will not use the graphing functionality. Recommended models: <https://www.amazon.com/Texas-Instruments-MultiView-Scientific-Calculator/dp/B000PDFQ6K> [https://www.amazon.com/dp/B005QXO8J0/ref=dp\\_cerb\\_3](https://www.amazon.com/dp/B005QXO8J0/ref=dp_cerb_3)

## Enrollment

### Prerequisites

Chemistry 30A, 25, 1A, or 1AH with a grade of C or better. EWRT 211 and READ 211 (or LART 211), or ESL 272 and 273.

### Recommended Preparation

I generally assume that students enrolled in Chemistry 30B have taken Chemistry 30A or 1A in-person at De Anza College within the last 6 months. If that does not describe your recent chemistry background, I encourage you to reach out early and often to myself as well as the campus tutoring and academic support services as issues arise.

### Late Adds and Add Codes / Drops

I will only give out add codes if space is available during the first week of class. If you are interested in joining the class, **you must attend lab and lecture this week**. Students who miss the first lab meeting will not be permitted to enroll in the course under any circumstances. Similarly, if you are enrolled in the course and miss the first lab, you will be dropped from the course during the lab period. ***I do not give out add codes after the first week of class***, and I strongly encourage you to enroll in an open section if you are on the waitlist.

## Hours

The study of chemistry combines both macroscopic and microscopic views of the natural world with mathematical models to explain and predict phenomena. This is a 5-unit class, and you should expect to spend 15 hours per week on class assignments. Divide this work throughout the week so that you don't get overwhelmed. Set aside a time and place that you can work on class materials every day. Because this is a hybrid class, students are further required to work on additional assignments and lecture material throughout the week.

## Course Objectives

We will cover the following topics in Chemistry 30B:

### Course Objectives

1. Examine the chemistry of simple organic molecules with an emphasis on structural features and nomenclature
2. Discuss contributions by scientists to the fields of organic chemistry, biochemistry, and chemical biology.

3. Identify stereochemical centers and differentiate enantiomers from other stereo- and geometrical isomers.
4. Examine the structure, reactivity and nomenclature of hydrocarbons.
5. Analyze and assess the structure, reactivity, and nomenclature of functionalized organic molecules including alcohols, thiols, ethers, aldehydes and ketones, carboxylic acids, esters, amines, and amides in the context of biological activity and applications
6. Examine the structure, stereochemistry, and reactivity of carbohydrates
7. Examine the structure and chemistry of fatty acids and lipids, as well as applications to the architecture of the cell membrane
8. Examine the structure and chemistry of amino acids and proteins
9. Examine the structure and chemistry of nucleic acids and apply these principles to the process of protein synthesis
10. Apply principles of organic structure and reactivity to metabolic pathways

### Course Student Learning Objectives

1. Differentiate the general reactions of the principle organic functional groups.
2. Evaluate the major classes of biological compounds from a chemical perspective.

### Active Course Outline

You can find a copy of the active course outline for this class at:

<https://www.deanza.edu/catalog/courses/outline.html?cid=chemd030b>

Please save a copy of the active course outline for your records.

### Important Dates

#### College Dates

For a full list of important dates, please see <https://www.deanza.edu/calendar/>

#### First Day of Class: September 27th, 2024

Attendance on the first day of class is **mandatory**. If you cannot attend, you will be dropped from the course.

#### Drop Deadline: October 6th, 2024

This is the last day to drop the class without it appearing on your transcript.

#### Withdraw Deadline: November 15th, 2024

This is the last day to drop classes. A "W" will be recorded on your transcript.

#### Excused Withdrawal

If circumstances beyond your control prevent you from completing the course, you may qualify for an excused withdrawal. Please see the following website for more information.

<https://www.deanza.edu/admissions/withdrawals.html>

### Attendance Policy

Your *punctual* attendance is expected at all class meetings. To be counted “present” and receive credit for that day’s activities, you must arrive during the first 5 minutes of class. If you arrive late, you may miss important information. If you will have to miss a class session for any reason, let me know by Canvas message as soon as possible. Notifying your instructor of absences or tardiness shows that you take your responsibility towards yourself and your fellow students seriously. In the case of a documented emergency (e.g. hospitalization, court appearance, car crash), I may excuse you from that day’s work. These instances will be handled and decided on a case-by-case basis. Travel does not constitute an emergency or grounds for an excused absence. It is the student’s responsibility to get notes from a classmate for missed information.

## Late Work Policy

With a few exceptions, all student assignments will be submitted on Canvas. Late work for *Pearson* assignments will be accepted until December 12th at 9:00 pm. I do not handle extensions or exceptions over email or through the Canvas inbox. In general, late labs will not be accepted under any circumstances. If you know you will need to miss a dry-lab day (e.g. worksheet), please contact me for requirements for turning it in.

## Weekly Schedule

|                          | <b>Lecture Topics</b><br><i>Required Reading</i>                                                                                       | <b>Lab Topics</b>                                 |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|
| Week 1<br>9/23–9/27      | Introductions <i>Syllabus</i><br>Molecular structure, polarity, and intermolecular forces<br><i>Owens Chapters 6 and 7</i>             | Lab Safety<br>Check-in                            |
| Week 2<br>9/30–10/4      | Introduction to Organic Molecules <i>Owens Chapter 13</i><br>Alcohols, Ethers, Thiols, and Chiral Molecules<br><i>Owens Chapter 14</i> | Organic Structure and Nomenclature<br>(worksheet) |
| Week 3<br>10/7–10/11     | Aldehydes and Ketones <i>Owens Chapter 15</i><br>Carbohydrates <i>Owens Chapter 16</i>                                                 | Polarimetry and Fischer Projections               |
| Week 4<br>10/14–10/18    | Carboxylic Acids, Esters, Amides <i>Owens Chapter 17</i><br>Lipids <i>Owens Chapter 18</i>                                             | Carbohydrate Tests                                |
| Week 5<br>10/21–10/25    | <b>EXAM 1: CHAPTERS 13–18</b>                                                                                                          | Carbohydrate Modeling (worksheet)                 |
| Week 6<br>10/28–11/1     | Amines and Neurotransmitters <i>Owens Chapter 19</i>                                                                                   | Aspirin Part I: Synthesis                         |
| Week 7<br>11/4–11/8      | Amino Acids and Proteins <i>Owens Chapter 20</i><br>Enzymes: Biological Catalysts <i>Owens Chapter 21</i>                              | Aspirin Part II: Analysis and Percent Yield       |
| Week 8*<br>11/12–11/15   | Nucleic Acids, DNA, and Genetic Testing<br><i>Owens Chapter 22</i><br>RNA and Protein Synthesis <i>Owens Chapter 23</i>                | Hydrolysis of Aspartame                           |
| Week 9<br>11/18–11/22    | Carbohydrate Metabolism <i>Owens Chapter 24</i>                                                                                        | Protein Reactions                                 |
| Week 10**<br>11/25–11/27 | <b>No class for Thanksgiving</b>                                                                                                       | <b>No class for Thanksgiving</b>                  |

|                       |                                                                         |                                                         |
|-----------------------|-------------------------------------------------------------------------|---------------------------------------------------------|
| Week 11<br>12/2–12/6  | Case study: How do GLP-1 mimics work?<br>Review                         | Clean-up and check-out<br><b>EXAM 2: CHAPTERS 18–24</b> |
| Week 12<br>12/9–12/13 | <b>Final Project Due 12/11</b><br><b>Grades will be finalized 12/13</b> | No lab for finals weeks                                 |

\*Note that 11/11 is a school holiday due to Veteran’s Day, so there will be *no office hours*.

\*\*11/28 and 11/29 are school holidays due to Thanksgiving

## How to Learn Chemistry

Chemistry is broad subject that has a reputation for being hard. This class will utilize many resources in concert to help you gain skills, knowledge, and understanding for you to apply chemical principles to multiple areas of study. The lectures will provide organization and context for the topics that we cover, and you should use the assigned reading to fill in the details.

1. Know where to find relevant information for the course, in particular the assigned reading for both the labs and the lectures.
2. Complete the assigned reading before coming to class. Review 1A topics that are unfamiliar. Write down any vocabulary words that you do not understand as well as their definitions *from the textbook*.
3. Practice and develop your critical reading skills.
4. Take *handwritten* notes during class and review your notes regularly. Cognitive science tells us that we learn new information better when we write rather than type.
5. Review your notes early and often. Use the assigned reading to fill in details and redraw important figures.
6. Write down any questions you have. Bring these questions with you to office hours or the drop-in tutoring center.
7. Most of the “rules” that you learn in chemistry are guidelines. There are exceptions. You will recognize these exceptions more as your chemical intuition builds.
8. Do a little bit every day. After every lecture, review the reading assignment and complete in-chapter and end-of-chapter exercises. Spend at least an hour on chemistry every day.
9. Seek conceptual understanding. Memorization will follow.
10. Join a study group. Work on problem sets together. The best way to learn the material is to teach it to somebody else.
11. Utilize the free tutoring services on campus and online through the MSTRC.
12. Turn in and finish assignments as soon as you are able. Don’t assume that you’ll have time to do it later, or immediately before the deadline. Life is unpredictable.
13. Take care of yourself! Stay well-rested and drink water. Your physical health and safety are your priority. If you need assistance with any basic needs, please reach out to me to referrals to campus resources.

## Laboratory Safety

All chemistry laboratories inherently come with associated risks and hazards. It is inevitable that some accidents will occur during your chemistry course work. When an accident occurs, **inform your instructor immediately** and **do not attempt to clean-up any broken glassware or spilled chemicals by yourself**. In order to ensure that the lab is as safe as possible, we must (1) **Recognize hazards**, (2) **Assess the risks of hazards**, (3) **Minimize the risks of hazards**, and (4) **Prepare for emergencies**.

You have the right to advocate for yourself. If you feel a particular procedure or chemical is unsafe, or a specific accommodation will enhance your lab experience, I welcome your feedback. I may not have an answer or solution for you right away, but I will work on your behalf to make sure that you can complete the labs safely.

From the American Chemical Society Safety In Academic Laboratories Guidelines, 7th Ed., the following mandatory minimum safety requirements must be followed by all students and be rigorously enforced by all chemistry faculty:

- 1) **Chemistry Department-approved safety goggles purchased from the De Anza College bookstore (NOT safety glasses) must be worn at all times once laboratory work begins, including when obtaining equipment from the stockroom or removing equipment from student drawers**, and may not be removed until all laboratory work has ended and all glassware has been returned to student drawers.
- 2) **Shoes that completely enclose the foot** are to be worn at all times; NO sandals, open-toed, or open-topped shoes, or slippers, even with socks on, are to be worn in the lab.
- 3) Shorts, cut-offs, skirts or pants exposing skin above the ankle, and sleeveless tops may not be worn in the lab: **ankle-length clothing must be worn at all times.**
- 4) Hair reaching the top of the shoulders must be tied back securely.
- 5) Loose clothing must be constrained.
- 6) Wearing "...jewelry such as rings, bracelets, and wristwatches in the laboratory..." should be discouraged to prevent "...chemical seepage in between the jewelry and skin...".
- 7) **Eating, drinking, or applying cosmetics in the laboratory is forbidden at ALL times, including during lab lecture.** *Food and drink containers are not allowed in lab at any time. If I see them, I will put them outside.*
- 8) Use of electronic devices requiring headphones in the laboratory is prohibited at ALL times, including during lab lecture.
- 9) Students are advised to inform their instructor about any pre-existing medical conditions, such as pregnancy, epilepsy, or diabetes, that they have that might affect their performance.
- 10) Students are required to know the locations of the eyewash stations, emergency shower, and all exits.
- 11) Students may not be in the lab without an instructor being present.
- 12) Students not enrolled in the laboratory class may not be in the lab at any time after the first lab period of each quarter.
- 13) Except for soapy or clear rinse water from washing glassware, **NO CHEMICALS MAY BE Poured INTO THE SINKS**; all remaining chemicals from an experiment must be poured into the waste bottle provided.
- 14) Students are required to follow the De Anza College Code of Conduct at all times while in lab: "horseplay", yelling, offensive language, or any behavior that could startle or frighten another student is not allowed during lab.
- 15) Strongly recommended: Wear Nitrile gloves while performing lab work; wear a chemically resistant lab coat or lab apron; wear shoes made of leather or polymeric leather substitute.

***Reckless behavior will not be tolerated. If your actions endanger the health and safety of yourself or another person, you will be asked to leave and you will receive a zero for the lab and related assignments. In extreme cases, you may lose your lab privileges for the remainder of the quarter and/or fail the course.***

## **Academic Integrity Policy**

The process of learning requires physical changes to occur in your brain. *Cognitive research demonstrates that consistent practice and learning to recognize mistakes are key aspects of the learning process.* As such, all students should be aware of the De Anza College policy on academic integrity outlined at [https://www.deanza.edu/policies/academic\\_integrity.html](https://www.deanza.edu/policies/academic_integrity.html). The following text is reproduced from the De Anza College manual:

*the college is committed to providing academic standards that are fair and equitable to all students in an atmosphere that fosters integrity on the part of student, staff and faculty alike. The student's responsibility is to perform to the best of his or her potential in all academic endeavors. This responsibility also includes abiding by the rules and regulations set forth by individual faculty members related to preparation and completion of assignments and examinations.*

I expect that all work submitted for this class will represent your own understanding of the material and must be written in your own words. Cheating, copying, plagiarizing, etc. will not be tolerated. Due to the "online" nature of the class, students must take extra care to abide by the policies and expectations set forth for each assignment. While it is tempting to use the full weight of the internet, some sources may provide misleading or corrupt information. Students should focus on the required reading and recommended resources for the class, and any other sources must be vetted by the instructor. Tutoring resources are allowed for homework assignments; however, using a paid, static resource is forbidden. This can be



particularly challenging as some websites that profess to provide tutoring services are actually destructive to the learning process. A good rule-of-thumb is that any tutoring service will help you solve a problem and arise at an answer *on your own*—this means that your brain is making new physical connections between neurons, and you are learning! If an online source professes to offer tutoring, but instead provides you with answers, this is cheating. The websites Chegg, CourseHero, Reddit, as well as any similar site are explicitly forbidden for all class assignments. Posting class assignments on these websites is considered intent to cheat. I am happy to discuss appropriate resources with you, and I encourage you to *ask for permission*.

You may collaborate with your classmates on lecture homework assignments; however, the final work that you submit must reflect your own understanding of the material. Do not allow any other student to copy your work under any circumstance. If a student asks if they can copy your work or “just see it as an example”, ask them to reach out to the instructor for help. If two students turn in the same work, both students will have participated in academic dishonesty.

Class assessments are used to measure an individual student’s mastery of the material. They are all closed resource, and you will be provided with any physical constants or additional information as necessary. A common mistake that past students have made is to Google a question and copy an answer from the internet—this behavior is forbidden, and the consequences are described below. If I suspect cheating on a quiz, you will be required to meet with me face-to-face.

Any incident of cheating or plagiarism, no matter how minor, will be reported to the Dean of Student Development and the Dean of the Physical Sciences, Mathematics, and Engineering division. Administrative consequences are summarized in the college manual. Additional consequences will be applied to your course grade. Please see the Grading Specifications Table for more information. If academic dishonesty is discovered within two-years of your completion of the course, your official grade will be changed.

I recognize that these consequences may sound scary. Unfortunately, I have had students who did not pass this class as a direct result of academic dishonesty. I *am* committed to supporting you and your learning process, and I expect you to display high ethical standards. I encourage you to bring questions to class and utilize the class discussions for additional feedback. If you are not sure if a resource is allowed, or if something feels “off” to you, alert your instructor right away. *I do reserve the right to make major changes to the class structure—including requiring an oral exam / exit interview—if there are widespread violations of the academic integrity policy.*

## Grading Policies and Assignment Types

To succeed in this course, you will need to exhibit **consistent and sustained effort** throughout the quarter. This will be demonstrated through in-class participation, laboratory preparation and data analysis, and examinations. Assignment types are assigned a weight; not all points are created equally!

### Weighted Grading Scheme

|                 |                    |
|-----------------|--------------------|
| Lecture         | 80% of total grade |
| Homework        | 10%                |
| Quizzes         | 10%                |
| Exams           | 40%                |
| Project         | 20%                |
| Lab             | 20% of total grade |
| Lab assignments | 20%                |

## Grade Scale

| Final %     | Grade <sup>1,2</sup> |
|-------------|----------------------|
| >99.0       | A+                   |
| >90.0       | A                    |
| 88.0 – 89.9 | A–                   |
| 85.0 – 88.9 | B+                   |
| 80.0 – 84.9 | B                    |
| 78.0 – 79.9 | B–                   |
| 75.0 – 77.9 | C+                   |
| 68.0 – 74.9 | C                    |
| 63.0 – 67.9 | D+                   |
| 55.0 – 62.9 | D                    |
| <55%        | F                    |

<sup>1</sup> If your average in either the lab or lecture portion of the course is less than 55%, you will receive an F as a final grade.

<sup>2</sup> A+ grades will be given to students who demonstrate excellence in the following three areas: lecture, lab and class participation.

Note that grades will be entered in Canvas; however, the gradebook and assignment types may not be finalized until the end of the quarter. I encourage you to make your own spreadsheet to keep track of your letter grade throughout the quarter.

## Assignment Types (Lecture)

Your attendance and active participation are expected at every lecture period. If you know that you will not be able to attend lecture for any reason, let me know by email right away (even if only 5 minutes before class or 5 minutes after the start of class). You are responsible for communicating with a classmate to get any notes or missed information. Late arrivals and early departures are distracting for the whole class (and me!), so arrive on time and stay for the whole class period. I strongly encourage taking your own notes in lecture. We will sometimes use computers or other electronic devices; however, do not use your computers for non-course related activities during lecture. Put your phone on silent or Do Not Disturb while you are in class. If you must take a phone call in case of emergency, quietly leave the room before answering the phone.

## Pearson Homework

MasteringChemistry is an online homework platform. You will have courtesy access to Mastering during the first two weeks of the quarter. If you decide to stay enrolled in the course, you will need to purchase access to Mastering for the remaining weeks. You may purchase access directly through Mastering (recommended), or through the campus bookstore. Mastering homework should be a learning opportunity to prepare you for exams. These assignments are not meant to be comprehensive, and you should always study from the textbook in addition to completing the homework.

## Quizzes

Intermittent quizzes will be available through *Mastering*. Additional details will be announced in class.

## Exams

There will be two midterm exams offered this quarter. Please see the Weekly Schedule for specific dates and content information. Exams will be proctored and taken on your laptop through either Canvas or Mastering (TBD). You should arrive to class on time for the exams. I do not guarantee that you will be able to take the exam

if you arrive late. I am typically unable to accommodate make-up exams; however, exceptions may be made in case of an emergency. If you require any accommodations for exams, you must be approved by DSPS. For extended-time or reduced-distraction exams, please schedule your exam in the DSPS office during the normal class time.

## Final Project

This class will culminate in a final project in which you will prepare a short presentation on the mechanism of action of a pharmaceutical drug. Your presentation must be completed and posted to Canvas by December 11th. Additional details will be available by Week 9 of the course.

## Assignments Types (Lab)

Chemistry is an experimental science, and the laboratory is a major component of the course. De Anza College does not offer make-up labs, and ***you must attend the laboratory section that you are registered for*** to complete the required labs. Everyone gets one excused absence with no grade penalty. A second absence, regardless of the circumstances of your first absence, will result in a zero for the lab and all associated assignments. After a third lab absence, you will automatically receive an “F” in the course.

Your timely attendance is expected at every lab. The beginning of each lab period is reserved for lab lecture. The lab lecture is a required component of the laboratory section and will include essential safety information. ***If you miss lab lecture, you will not be permitted to complete that lab and you will receive a zero for all related assignments.***

You must clean up your work area before leaving each lab. Failure to do so will result in a loss of points for that lab. Before you leave lab, ***check-out with me.*** You will not receive credit for the lab unless I have reviewed your data and analysis.

Lab assignments may consist of pre-labs, completion of laboratory experiments and mindful data collection, and analysis of data.

## ACS Laboratory Safety Course

The ACS Laboratory Safety Course must be completed by the second lab meeting and before you will be allowed to perform any lab experiments. *You will be dismissed from lab and receive a zero for the day if you have not completed the lab safety course.*

## Lab Worksheets

Lab worksheets will be posted on the course webpage. The precise nature of the assignment and the number of points available will vary. Analysis worksheets must be printed and are typically due at the end of lab. *All lab worksheets must be submitted in lab— online and “after hours” submissions will not be accepted for credit.*

**Student Learning Outcome(s):**

- Differentiate the general reactions of the principle organic functional groups.
- Evaluate the major classes of biological compounds from a chemical perspective.

**Office Hours:**

M      11:30 AM      02:20 PM      In-Person      S55