Chemistry 30B: Introduction to General, Organic, and Biochemistry II **W23**
Dr. Brophy

Instructor Dr. Megan Brunjes Brophy
Contact Canvas messages
brophymegan@fhda.edu

Course Webpage: Canvas. You will be automatically added to the Canvas roster when you are enrolled in the course. *Turn on notifications to receive class announcements.*

Class Meetings

Lecture	Wednesday	5:30 pm – 7:20 pm	SC1102
	-	*Asynchronous*	Canvas
Lab	Wednesday	7:30 pm – 10:20 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 is expected every week. The lecture component will consist of both in-person and asynchronous online content. If you cannot attend the lab session in-person you should not register for this course.*

Chemistry Chats	Monday	4:30 pm – 5:30 pm	Zoom
	Wednesday	4:30 pm – 5:30 pm	S43
	Friday	1:30 pm – 2:50 pm	SC1220
Important Dates	Add Day	January 21	*Last day to add classes*
	Drop Day	January 22	*Last day to drop classes without a W*
	Withdraw Day	March 3	*Last day to drop classes with a W*

Required Materials

- **Textbook** *General, Organic, and Biological Chemistry* by Smith. Any edition is fine, and we will not use the publisher's online homework system this quarter. I encourage you to find any low-cost and affordable option.
- **Lab Manual** *Laboratory Manual for General, Organic, and Biological Chemistry* (custom). Available at the bookstore.
- **Calculator** 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
- **Computer and printer access.** This is a hybrid course with extensive technological requirements. Is it 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 the many platforms that we use. *Start your work early so that you do not fall behind.*
- **Genius Scan** 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.*
- **Lab Goggles** Eye protection is a essential PPE. You must bring department-approved ANSI lab goggles to each lab period.
- **Aktiv Chemistry** We will use Aktiv for our online homework platform this quarter. You may enroll in the class Aktiv course through Canvas. You will have courtesy access to Aktiv until January 27th. By this point, you should purchase an access code directly from Aktiv or through the campus bookstore.

Add / Drop Policy

In order to be added to the class from the waitlist, you must attend the first class meetings for the section that you are interested in joining. You may only be on the waitlist for one section. Each section has a strict size limit of 30 students, and additional students will not be added beyond this number. If any spots open up, students will generally be added in the order

of the official waitlist on ActiveRoster. I will notify waitlisted students of any openings in the class by 5:00 pm on January 13th. Students will not be permitted to add the class after the first week of classes under any circumstances.

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 excused absence. It is the student's responsibility to get notes from a classmate for missed information.

Academic Integrity

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. 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*.

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 a living document. ***All corrections and changes to this syllabus will be announced through Canvas.***

This class is divided into two separate instructional periods: a lecture period devoted to the primary course material and a lab period for conducting lab experiments. Everyone will have the same lecture period, but a different lab period depending on which section you are enrolled in. At De Anza College, the lab and lecture may not be taken as separate courses under any circumstances.

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.

Prerequisites
Chemistry 1A, Chemistry 25, *or* Chemistry 30A
EWRT 211 and READ 211 (or LART 211), or ESL 272 and 273.

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.

Course Objectives
1. Examine the chemistry of simple organic molecules with an emphasis on structural features and nomenclature.
2. Examine the chemistry of unsaturated hydrocarbons, structure, and reactivity.
3. Analyze and assess the properties of alcohols, thiols, ethers, aldehydes, and ketones.
4. Analyze and assess the properties of carboxylic acids, esters, amines, and amides.
5. Examine the chemistry of carbohydrates.
6. Examine the chemistry of fatty acids, lipids, and the cell membrane.
7. Examine the chemistry of amino acids and proteins.
8. Examine the chemistry of nucleic acids and summarize the process of protein synthesis.
9. Inspect various metabolic pathways and relate them to energy production.

Active Course Outline
The active course outline for this class may be found online at:
https://www.deanza.edu/catalog/courses/outline.html?cid=chemd030b
Please save a copy of the active course outline for your records.

Study Tips
1. Complete the assigned reading before coming to class. Review 30A topics that are unfamiliar. Write down any vocabulary words that you do not understand as well as their definitions.
2. Take *handwritten* notes during class and review your notes regularly. Write down any questions you have and bring them to office hours or e-mail your instructor.
3. *Do a little bit every day*. After every lecture, review the reading assignment and complete in-chapter and end-of-chapter exercises.
4. Join a study group. Work on problem sets together. The best way to learn the material is to teach it to somebody else.
5. If you feel that you are a poor test-taken, *complete and turn in all assignments on time* in order to pass the class.
6. Take care of yourself! Stay well-rested and drink water.

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:

F	01:20 PM	02:20 PM	In-Person	SC1120
M	04:20 PM	05:30 PM	Zoom	
W	04:20 PM	05:30 PM	In-Person	S43