

South Plains College
Common Course Syllabus: CHEM 2423
Revised December 2022

Department: Science

Discipline: Chemistry

Course Number: CHEM 2423

Course Title: Organic Chemistry I

Instructor:

Dr. Laci Alexander

Office: S105, Science building

Phone: 716-2322

Email: lalexander@southplainscollege.edu

Office Hours: W: 2:15 – 3:15 PM; TR: 8:00 – 9:30 AM

F: 8:00 AM – 12:00 PM

Office hours can also be made by appointment.

Available Formats: Conventional

Campuses: Levelland

Course Description: Fundamental principles of organic chemistry will be studied, including the structure, bonding, properties, and reactivity of organic molecules; and properties and behavior of organic compounds and their derivatives. Emphasis is placed on organic synthesis and mechanisms. Includes study of covalent and ionic bonding, nomenclature, stereochemistry, structure and reactivity, reaction mechanisms, functional groups, and synthesis of simple molecules. THIS COURSE IS INTENDED FOR STUDENTS IN SCIENCE OR PRE-PROFESSIONAL PROGRAMS. 2 A laboratory-based course accompanies CHEM 2423. Laboratory activities will reinforce fundamental principles of organic chemistry, including the structure, bonding, properties, and reactivity of organic molecules; and properties and behavior of organic compounds and their derivatives. Emphasis is placed on organic synthesis and mechanisms. Includes study of covalent and ionic bonding, nomenclature, stereochemistry, structure and reactivity, reaction mechanisms, functional groups, and synthesis of simple molecules. Methods for the purification and identification of organic compounds will be examined.

Prerequisite: A grade of "C" or better in CHEM 1412.

Credit: 4 **Lecture:** 3 **Lab:** 4

Suggested materials:

- Organic model kit (options will be posted on blackboard)
- Laboratory notebook

Supplies:

Safety Goggles – Required, obtained from bookstore

Calculator – Required, must be scientific, **CELL PHONES NOT ALLOWED**

Laboratory gloves- Required, Examination style. Nitrile is recommended and offers the best protection

Core Curriculum Objectives addressed:

- **Communications skills**—to include effective written, oral and visual communication
- **Critical thinking skills**—to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information
- **Empirical and quantitative competency skills**—to manipulate and analyze numerical data or observable facts resulting in informed conclusions
- **Teamwork**—to include the ability to consider different points of view and to work effectively with others to support a shared purpose or goal

Student Learning Outcomes:**From Lecture:**

1. Classify organic compounds by structure, molecular orbitals, hybridization, resonance, tautomerism, polarity, chirality, conformation, and functionality.
2. Identify organic molecules using appropriate organic nomenclature.
3. Describe the principle reactions for syntheses of molecules, ions, and radicals.
4. Describe organic reactions in terms of radical and ionic mechanisms.
5. Describe the use of spectroscopic data to determine the structure of organic molecules.
6. Formulate appropriate reaction conditions for the synthesis of simple organic molecules.

From Lab

1. Perform chemical experiments, analysis procedures, and waste disposal in a safe and responsible manner.
2. Utilize scientific tools such as glassware and analytical instruments to collect and analyze data.
3. Identify and utilize appropriate separation techniques such as distillation, extraction, and chromatography to purify organic compounds.
4. Record experimental work completely and accurately in laboratory notebooks, and communicate experimental results clearly in written reports.
5. Demonstrate a basic understanding of stereochemistry.
6. Classify organic compounds by structure, molecular orbitals, hybridization, resonance, tautomerism, polarity, chirality, conformation, and functionality in laboratory reports.
7. Identify organic molecules using appropriate organic nomenclature in laboratory reports.
8. Perform organic syntheses of molecules.
9. Describe organic reactions in terms of radical and ionic mechanisms in laboratory reports.
10. Use spectroscopic data to determine the structure of organic molecules.

11. Formulate appropriate reaction conditions for the synthesis of simple organic molecules.

Student Learning Outcomes Assessment: 2-3 questions from each semester will be randomly selected from the regular exams. These will pertain to a pre-selected topic and will be used to determine the extent of improvement that the students have gained during the semester.

Course Evaluation:

- **Three Major Exams**
 - NO MAKEUPS
 - Each Exam is worth 100 points with the possibility of bonus points

- **Final Exam**
 - The final is REQUIRED. The final exam is the 4th major exam. It is not comprehensive.
 - You will take the final exam on the day it is scheduled. Final Exams are scheduled by the college not the instructor. **If you do not take the Final Exam, you will receive a zero for your score, which will be factored into your class average.**

- **Notecards**
 - You will be allowed to write reference notes on one side of a letter sized sheet of paper, for use on the major exams and the final. Your 'cheat sheet' must be turned in with your exam.

- **Exam Makeups:**
 - **Lecture Exams** can be made up IF I am given *advance notice*. Don't just show up to the next class and expect to take a make up. I will dictate the terms of the makeup. Once a graded exam is returned to the class, it can no longer be made up. This means your exam MUST BE MADE UP BEFORE the next class period.
 - **Final Exam:** Exam times are scheduled by the college, not the instructor. If the Final Exam is missed due to situations beyond your control (I am the judge of that), I will do my best to fit you in *during Final Exam week*. You must notify me of the reason for your absence as soon as possible. A final Exam makeup must be **COMPLETED** BY 3 pm of the Thursday of Final Exam week, or it becomes a zero.
 - **In extreme cases** that would prevent you from coming in to take the Final Exam (ie. Cases requiring hospitalization), you may be excused from taking the Final Exam and your grade would be based on the scores you do have. (Unless the college has a contingency plan for such situations.) I won't just "take your word for it" I will need written proof.

- **Labs**
 - Proper Laboratory Dress: You must wear safety glasses and laboratory gloves for every experiment. A student will NOT be able to enter the lab without the proper attire (Closed toed shoes, long pants, shirt with sleeves, long hair pulled back, and safety glasses and gloves)

- You may not bring snacks or drinks into the lab. They should be placed on the instructor desk, or put in your bag. Do not set them on the lab bench. You may not eat your lunch in the lab, or use the microwave.
- Book bags should be placed next to your lab station, away from foot traffic, not on the lab bench. The lab bench is where experiments are done.
- **Lab Worksheets, Experiments**
 - **A student will NOT be able to enter the lab without the proper attire (closed toed shoes, long pants, shirts with sleeves, long hair pulled back, and safety goggles). A student that is not dressed appropriately for lab will not be able to perform the experiment and therefore will receive a 0 for that Lab Worksheet.**
 - You will perform a series of experiments in the lab. Your lab grade will be based on scores you receive on six lab reports.
 - Organic Lab is not an 'option'. There is an option of a lab grade being dropped (see dropped grades)
 - You will be working with a lab partner, and will be working with data gathered by your lab group. You will officially choose a lab partner at the beginning of the semester and that person will be your lab partner for the entire semester. You and your lab partner will submit jointly written lab reports.
 - You may not share laboratory data between lab groups. Each group is responsible for obtaining its own data. The standard group size will be two students. If your lab partner is absent, you will work along that day. You may not simply join up with another group. If you are both absent on the same day, the work you missed cannot be made up, and this will adversely affect your lab report grade. If your lab partner drops the class, you will work alone until I can pair you up with another group. Some shuffling of lab groups may be necessary during the semester due to drops.
 - All this is to say, you and your lab partner will need to work together as a team to succeed in the lab portion of this course. Time working together outside of the laboratory may also be necessary. Be sure your lab partner is doing his/her share of the work. And be sure to tell your lab partner if you must miss lab on a particular day. There is no excuse for not doing so, in the day of email and texting.
 - You must come to lab prepared to get to work, which includes your having read the assignment from the lab textbook. The actual time Organic Lab ends each day may vary. The bottom line is you must finish each day's tasks. I will inform you of how far you are to get each day. However, **everyone must be out of the lab by 3:00 pm**
 - Each of you is responsible for keeping the lab clean and neat. This applies to your workstation and lab locker, as well as to the common-use chemicals, equipment, and instruments.
 - Equipment breakage and Loss
 - The equipment you use in lab is specific to this class, expensive, and in limited supply. **If your group breaks or loses something, you may have to work without that piece until I can find a replacement. Don't just assume I have an on-the-spot replacement.**

- Restarting experiments
 - You must do the experiments on the days they are scheduled. A restart of an experiment (on the same day, only) is meant for something like equipment malfunction, not mistakes or poor results. **You should inform me of your intention to do a restart.** It will be your responsibility to catch back up to the rest of the class – *during lab time only*. I will not keep the lab open late for a group that is trying to catch up. An experiment ends on the same day for everyone, restart or not.
- The Organic Lab Notebook
 - Any specific spiral bound or composition notebook is fine. The notebook must be used specifically for your lab reports
- Lab reports
 - You will submit a typed lab report. This plus your chapter homework will be 30% of your grade.
 - After completing an experiment you will write a lab report to be submitted on blackboard via gradescope. Details for writing the lab report can be found in the lab manual. Late Lab reports will NOT be accepted.
- **Chapter Homework**
 - Homework is meant to prepare you for the lecture Exams. Problems will be assigned from the textbook for each chapter and included in homework handouts. Homework will be collected and graded according to the syllabus assignment dates posted on blackboard.
- **Dropped Grades**
 - Lowest two Grades Dropped
 - At the end of the semester the Instructor will automatically drop the lowest two grades from the total of the lab and homework. The lowest TWO grades will be dropped.
- **Cell Phone and Laptop Computer Policy**
 - Cell Phones and Laptops may be taken up and kept during lecture and lab if they are a distraction to the student, the instructor or the class
 - The only exception will be due to Special Services recommendations and those will be handled on an individual student to student basis
- **Grading:**
 - Exams are 70%
 - Homework and Labs combined are 30%
- **Attendance Policy:**
 - 6 absences max and I drop you with an 'F'

Class attendance is very important. Make every effort to be present. If you must miss a class or must leave early, please let me know about it **BEFORE** class begins or an unexcused absence will be given. You must attend the **FULL** time of class in order to be

considered present. You will be counted absent if you leave during the scheduled class time.

If you are unable to complete this course, you must initiate a withdrawal (W) through the Registrar's Office before **the drop date**. If you simply stop attending class without withdrawing, I will administratively drop you for excessive absences, and you will receive a grade of "F" at the end of the term, in accordance with policies set forth in the 2021-2022 SPC General Catalog.

You are a candidate for an excess absence drop (F) if you miss 4 class days **total**, without clearing your absences with me. Two excused absences equal one unexcused absence and will count towards the 4 excess absences.

Tardy: If you show up AFTER the attendance sheet has been passed around you WILL NOT be allowed to sign the attendance sheet, therefore will be counted absent. The attendance sheet will be passed around sometime after 30 mins into the class. *It is the student's responsibility to verify administrative drops for excessive absences through MySPC using his or her student online account. If it is determined that a student is awarded financial aid for a class or classes in which the student never attended or participated, the financial aid award will be adjusted in accordance with the classes in which the student did attend/participate and the student will owe any balance resulting from the adjustment.*

Plagiarism and Cheating: Students are expected to do their own work on all projects, quizzes, assignments, examinations, and papers. Failure to comply with this policy will result in an F for the assignment and can result in an F for the course if circumstances warrant. If a student is caught cheating on any of the Major Exams they will receive a 0 for that Exam **and** be the Final Exam will **NOT** replace the lowest Exam score (the 0 stands and cannot be replaced)

Plagiarism violations include, but are not limited to, the following:

1. Turning in a paper that has been purchased, borrowed, or downloaded from another student, an online term paper site, or a mail order term paper mill;
2. Cutting and pasting together information from books, articles, other papers, or online sites without providing proper documentation;
3. Using direct quotations (three or more words) from a source without showing them to be direct quotations and citing them; or
4. Missing in-text citations.

Cheating violations include, but are not limited to, the following:

1. Obtaining an examination by stealing or collusion;
2. Discovering the content of an examination before it is given;
3. Using an unauthorized source of information (notes, textbook, text messaging, internet, apps) during an examination, quiz, or homework assignment;
4. Entering an office or building to obtain unfair advantage;
5. Taking an examination for another;
6. Altering grade records;
7. Copying another's work during an examination or on a homework assignment;

8. Rewriting another student's work in Peer Editing so that the writing is no longer the original student's;
9. Taking pictures of a test, test answers, or someone else's paper.

Curving of Scores and Extra Credit: This class is not graded on a curve, although there will be extra credit opportunities announced in class.

4.0 INSTRUCTIONAL POLICIES AND RESPONSIBILITIES

4.1 Course Syllabi

The syllabus for each course should be reviewed annually and revised as appropriate by the faculty. Instructors are encouraged to think and plan course and units of instruction, i.e., content, methods of presentation, teaching aids, student roles and tests in terms of student behavioral objectives. Student participation in planning, where practical, and their orientation about course plans tend to enhance course relevancy. Copies of syllabi should be filed with the department chairperson and the appropriate dean.

4.1.1 Syllabus Statements

Each syllabus should include the following Diversity Statement, Disabilities Statement, Non-Discrimination Statement and Title IX Pregnancy Accommodations Statement appropriate to the location of the course.

4.1.1.1. Diversity Statement

In this class, the teacher will establish and support an environment that values and nurtures individual and group difference and encourages engagement and interaction. Understanding and respecting multiple experiences and perspectives will serve to challenge and stimulate all of us to learn about others, about the larger world and about ourselves. By promoting diversity and intellectual exchange, we will not only mirror society as it is, but also model society as it should and can be.

4.1.1.2. Disabilities Statement

Students with disabilities, including but not limited to physical, psychiatric, or learning disabilities, who wish to request accommodations in this class should notify the Disability Services Office early in the semester so that the appropriate arrangements may be made. In accordance with federal law, a student requesting accommodations must provide acceptable documentation of his/her disability to the Disability Services Office. For more information, call or visit the Disability Services Office at Levelland (Student Health & Wellness Office) 806-716-2577, Lubbock Centers (located at the Lubbock Downtown Center) 806-716-4675, or Plainview Center (Main Office) 806-716-4302 or 806-296-9611.

4.1.1.3 Non-Discrimination Statement

South Plains College does not discriminate on the basis of race, color, national origin, sex, disability or age in its programs and activities. The following person has been designated to handle inquiries regarding the non-discrimination policies: Vice President for Student Affairs, South Plains College, 1401 College Avenue, Box 5, Levelland, TX 79336. Phone number 806-716-2360.

4.1.1.4 Title IX Pregnancy Accommodations Statement

If you are pregnant, or have given birth within six months, Under Title IX you have a right to reasonable accommodations to help continue your education. To activate accommodations you must submit a Title IX pregnancy accommodations request, along with specific medical

documentation, to the Health and Wellness Center. Once approved, notification will be sent to the student and instructors. It is the student's responsibility to work with the instructor to arrange accommodations. Contact the Health and Wellness Center at 806-716-2529 or email dburleson@southplainscollege.edu for assistance.

4.1.1.5 OPTIONAL STATEMENT - Campus Concealed Carry Statement

Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in South Plains College buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and South Plains College policy, license holders may not carry a concealed handgun in restricted locations. For a list of locations and Frequently Asked Questions, please refer to the Campus Carry page at: <http://www.southplainscollege.edu/campuscarry.php>

SPC Bookstore Price Match Guarantee Policy:

If you find a lower price on a textbook, the South Plains College bookstore will match that price. The difference will be given to the student on a bookstore gift certificate! The gift certificate can be spent on anything in the store.

If students have already purchased textbooks and then find a better price later, the South Plains College bookstore will price match through the first week of the semester. The student must have a copy of the receipt and the book has to be in stock at the competition at the time of the price match.

The South Plains College bookstore will happily price match BN.com & books on Amazon noted as *ships from and sold by Amazon.com*. Online marketplaces such as *Other Sellers* on Amazon, Amazon's Warehouse Deals, *fulfilled by Amazon*, BN.com Marketplace, and peer-to-peer pricing are not eligible. They will price match the exact textbook, in the same edition and format, including all accompanying materials, like workbooks and CDs.

A textbook is only eligible for price match if it is in stock on a competitor's website at time of the price match request. Additional membership discounts and offers cannot be applied to the student's refund.

Price matching is only available on in-store purchases. Digital books, access codes sold via publisher sites, rentals and special orders are not eligible. Only one price match per title per customer is allowed.

Note: The instructor reserves the right to modify the course syllabus and policies, as well as notify students of any changes, at any point during the semester.

The following statement should be included in all course syllabi for face-to-face and hybrid instruction options:

If you are experiencing any of the following symptoms, please do not attend class and either seek medical attention or test for COVID-19.

- Cough, shortness of breath, difficulty breathing
- Fever or chills
- Muscles or body aches

- Vomiting or diarrhea
- New loss of taste and smell

Please also notify DeEtte Edens, BSN, RN, Associate Director of Health & Wellness, at dedens@southplainscollege.edu or 806-716-2376. Proof of a positive test is required. A home test is sufficient but students must submit a photo of the positive result. The date of test must be written on the test result and an ID included in the photo. If tested elsewhere (clinic, pharmacy, etc.), please submit a copy of the doctor's note or email notification. Results may be emailed to DeEtte Edens, BSN, RN at dedens@southplainscollege.edu.

A student is clear to return to class without further assessment from DeEtte Edens, BSN, RN if they have completed the 5-day isolation period, symptoms have improved, and they are without fever for 24 hours without the use of fever-reducing medication.

Students must communicate with DeEtte Edens, BSN, RN prior to their return date if still symptomatic at the end of the 5-day isolation.