

Chemistry 28A, Fall 2023 Course Syllabus

Reedley College, SCCC

Course Info:

Course #: 52042 – 11:00am-12:15pm in MSCI-204; All course activities are held in-person (see course schedule)

Instructor and Contact Information:

Instructor: Kurtis Thiesen
Office: MSCI-221
Office Hours: Mon 11-11:50am, Wed 11-11:50am, Fri 8-10:30am
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Prerequisites:

To become enrolled in CHEM 28A students need to have passed CHEM1B with a grade of C or better.

Required Items

***Textbook:** Organic Chemistry: 4th edition, by David Klein (but the 2nd or 3rd edition would be fine also)

***Note:** You're welcome to rent, purchase, or borrow this textbook anywhere you can find one. Homework will be administered using an online program called WileyPLUS. The registration code for WileyPLUS comes bundled with our textbook (in the RC bookstore) or it may be purchased separately if you buy/rent/borrow a book elsewhere. Note: The WileyPLUS registration code (which includes online-only ebook access) may be purchased for one semester (28A only) or two semesters (28A and 28B).

Scientific calculator: Any scientific calculator is acceptable, but graphing/programmable calculators and cell phone calculators are NOT allowed during exams.

Course Description

This course is a study of the structures, properties, nomenclature and reactions of organic compounds with emphasis on reaction mechanisms. The course is recommended for students whose major is chemistry, premedical, pre-dental, pre-pharmacy, biology, biochemistry or chemical engineering. The following topics are included: stereochemistry, alkanes, alkenes, alkynes, alkyl halides, alcohols, amines, ethers, epoxides, aromatics, and organometallic compounds, resonance and conjugation, kinetic and thermodynamic control of reactions, multistep syntheses, infrared spectroscopy, nuclear magnetic resonance spectroscopy, and mass spectrometry.

Important Dates:

Friday (8/18) – Last day to drop in order to receive a full refund

Friday (8/25) – Last day to drop in-person in order to avoid a “W”

Friday (10/6) – Last day to drop with a “W” (a letter grade will be assigned after this date)

Course Policies:

Lecture Attendance:

- Lectures will be posted on Canvas; lecture exams will be given in-person (see course schedule).

Canvas:

- Canvas will be used extensively in this course, and students will be expected to check regularly for updates; lecture PowerPoints and other important documents will be uploaded to Canvas regularly.

Reading:

- Listed on the course schedule is the associated reading for each chapter. The course expectation is that you will have completed the readings before coming to class on the days those topics are discussed etc.

Missed exams:

- Make-up exams are generally not given. Since your lowest exam is dropped, if you miss an exam, that score of “0” will count as your dropped score.
- Official RC Policy concerning absences - “There are no institutionally approved excused absences for any reason. Only your instructor may excuse an absence. Absences caused by personal engagements, transportation delays and business affairs will not be excused, nor will absences from class to complete registration or add/drop activities...Makeup work must be completed to the satisfaction of the instructor of the course. Being excused from class does not relieve the student from the responsibility for completing all assignments.”

Cheating:

- Cheating is the act or attempted act of taking an examination or performing an assigned, evaluated task in a fraudulent or deceptive manner, such as having improper access to answers in an attempt to gain an unearned academic advantage. Cheating may include, but is not limited to, copying from another’s work, supplying one’s work to another, giving or receiving copies of examinations without an instructor’s permission, using or displaying notes or devices inappropriate to the conditions of an examination, allowing someone other than the officially enrolled student to represent the student, or failing to disclose research results completely.
- You are encouraged to work together on homework assignments. However, ***your individual work must be evident***. Do not allow others to copy directly from your work. Instances of confirmed cheating will generally result in failure in this course and be referred to the Dean for further action.
- Electronic devices such as cell phones, tablets, etc. are not allowed during exams and must be put away in a backpack or purse; confirmed use of these devices constitutes cheating.
- As an alternative to automatic failure in the course, at the instructor’s discretion, you may instead be assigned negative credit for the amount of points possible on the assignment. In this instance, the score would not be allowed to be dropped as your lowest score.
- RC Academic Dishonesty Statement: *“Because cheating, plagiarism, and collusion in dishonest activities erode the integrity of the college, each student is expected to exert an entirely honest effort in all academic endeavors. Academic dishonesty in any form is a very serious offense and will incur serious consequences.”*

Plagiarism:

- Plagiarism is a specific form of cheating: the use of another’s words or ideas without identifying them as such or giving credit to the source. One of the most common forms of this is copying information from a website and pasting it into your document. Instances of plagiarism will be treated like any other form of cheating.

Disabled Students:

- It is our policy not to discriminate against any student. If you suspect that you have any type of physical disability or learning disability that is relevant to your performance in the course, I’ll encourage you to come talk to me about it right away (though you’re not required to). Additionally, it may be helpful for you to stop by the disabled student services office and talk with staff members there to determine what kinds of services and support are available to you to help you succeed in this and other courses. SCCC policy: *If you have a verified need for an academic accommodation or materials in alternate media (i.e., Braille, large print, electronic text, etc.) per the Americans with Disabilities Act (ADA) or Section 504 of the Rehabilitation Act, please contact the Disabled Student Services as soon as possible.*

Electronic Devices:

- Use of electronic devices (laptop, tablet, etc.) in the classroom is acceptable as long as it is not a distraction to the instructor or to other students. Electronic devices of any kind are NEVER permitted during exams.

Grading: Your course grade will be calculated as follows:

*Exams	67% (5 unit exams worth 13.4% each)
Final exam	18%
Homework	15%

*I will replace your lowest unit exam score with your final exam score if your final exam score exceeds it (see “exams” section for a more detailed explanation).

***Grading Scale:**

A	90-100%
B	80-89%
C	70-79%
D	60-69%
F	0-59%

*The instructor reserves the right to alter grade ranges to accommodate borderline grades.

Exams:

There will be 5 unit exams that are weighted equally and a final exam which is weighted more heavily; these exams may be multiple choice, essay, short answer, or a mixture of these. Make-up exams will NOT be given for unit exams or for the final exam; however, the score on your lowest unit exam may be replaced by your final exam score if your final exam score exceeds it (and if you miss an exam, this will automatically count as your lowest unit exam score). Though each unit exam will be written primarily to examine topics in the current unit/recent chapters, topics in chemistry build upon one another and so all exams should be considered comprehensive.

Homework:

Homework will be administered online using WileyPLUS. A registration code for online access to WileyPLUS comes bundled with our textbook (if you purchase it in the RC bookstore) or it may be purchased separately online during the registration process. We will discuss multiple options for purchasing the textbook and WileyPLUS access on the first day of class.

Additional HW information:

Registration Info: <https://wpsupport.wiley.com/s/article/Student-Registration-for-WileyPLUS>

Course section ID: **B53323**

Student Learning Outcomes for CHEM 28A:

(Upon completion of this course, students will be able to:

1. analyze the structural formula of an organic compound, recognize its functional groups and name it properly.
2. draw a structural formula given the systematic name of an organic compound.
3. recognize stereochemistry and describe the physical properties of chiral compounds.
4. complete the reactions of many aliphatic molecules and write the correct reaction mechanism
5. analyze MS, IR and NMR spectra and determine the structure of an unknown compound.

Course Objectives for CHEM 28A:

In the process of completing this course, students will:

1. analyze the structural formula of an organic compound, recognize its functional groups and name it properly using the IUPAC nomenclature.
2. draw structural formulas and line-bond formulas given the systematic name of an organic compound.
3. identify stereochemistry in organic molecules, recognizing asymmetric carbon atoms that cause chirality.
4. write in products, reactants, solvents, catalysts and reactions conditions for reactions of many aliphatic molecules and practice writing correct reaction mechanisms.
5. analyze MS, IR and NMR spectra and use them to determine the structure of an unknown compound.

CHEM 28A, Fall 2023 Schedule

This schedule is a tentative one, and is subject to change by the instructor. As outlined in the course policies above, it is expected that you will be reading the textbook material associated with our in-class discussions before coming to class. Keeping up with the course topics is vital to your success in this course; notice that we're covering 15 chapters...that's about one chapter per week if you remove exam days from our schedule!

Week No.	Month & Day	Topic
Week 1	Aug 8	Syllabus, course policies, Ch 1.1-1.8
	Aug 10	Ch 1.9-1.13
Week 2	Aug 15	Ch 2.1-2.12
	Aug 17	Ch 3.1-3.5
Week 3	Aug 22	Ch 3.6-3.9
	Aug 24	Ch 4.1-4.9
Week 4	Aug 29	Ch 4.10-4.14
	Aug 31	Exam #1 (Chapters 1-3)
Week 5	Sept 5	Ch 5.1-5.5
	Sept 7	Ch 5.6-5.9
Week 6	Sept 12	Ch 6.1-6.7
	Sept 14	Ch 6.8-6.12
Week 7	Sept 19	Ch 7.1-7.7
	Sept 21	Exam #2 (Chapters 4-6)
Week 8	Sept 26	Ch 7.8-7.9
	Sept 28	Ch 8.1-8.11
Week 9	Oct 3	Ch 8.12-8.14
	Oct 5	Ch 9.1-9.10
Week 10	Oct 10	Ch 9.11-9.13
	Oct 12	Ch 10.1-10.8
Week 11	Oct 17	Exam #3 (Chapters 7-9)
	Oct 19	Ch 10.9-10.11
Week 12	Oct 24	Ch 11 (selected topics)
	Oct 26	Ch 13.1-13.9
Week 13	Oct 31	Ch 13.10-13.13
	Nov 2	Ch 14.1-14.9
Week 14	Nov 7	Exam #4 (Chapters 10-11, 13)
	Nov 9	Ch 14.10-14.12
Week 15	Nov 14	Ch 15.1-15.8
	Nov 16	Ch 15.9-15.14
Week 16	Nov 21	Ch 16.1-16.9
	Nov 23	Thanksgiving holiday (No lecture scheduled)
Week 17	Nov 28	Ch 16.11-16.13
	Nov 30	Exam #5 (Chapters 14-15)
Week 18	Dec 5	Final Exam (Ch16/Cumulative): 11am-12:50pm