



CHEM 213

Lecture M & W 7:00 – 8:25am | Lab M & W 8:35 – 11:40am | both meet in CYN 104 | [Campus Map](#)

Prof. Kelly Boebinger | kboebinger@craftonhills.edu | CYN 227 | Office hours MW 6:30a – 7a & 11:40a – 12:40p

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Technical Requirements & Support

You'll need access to a device with internet and Canvas capability to complete this course. If you experience technical issues, help is available: **Canvas Support:** Access 24/7 help via the CHC Student Support Portal. **Help Desk:** Call 1.909.384.4357 (M–F, 8 AM–5 PM) for additional assistance.



Want to Get Ahead?

Leah4Sci has the **Best** Online OCHEM Videos & Tutorials: Look for them both [online](#) and on [YouTube](#)

Visit her site for a lot of information to start right: [Organic Chemistry Preview Guide: What to Pre-Study for the Upcoming Semester](#)

See also *has* [MCAT Tutorials](#)

Welcome to CHEM 213 – Organic Chemistry II

Welcome to Organic Chemistry! I'm excited to guide you through this challenging yet rewarding course. Stay curious, work hard, and don't hesitate to ask questions. Together, we'll explore the fascinating world of chemical reactions and discoveries. Let's make this a successful and enjoyable journey!



CHC Canyon Hall (CYN)

What is This Course About?

Organic chemistry is the study of carbon-based compounds and their reactions, essential to understanding life and the natural world. This course will provide foundational knowledge and hands-on experience with concepts critical to fields like medicine, materials science, and environmental sustainability. Through lab work, you'll learn techniques such as chromatography and spectroscopy to analyze compounds and explore synthesis methods for creating new materials. This education prepares you for advanced scientific studies and real-world applications.

What Skills Will Benefit Me in My Future?

Critical thinking is a key skill for success in academics, careers, and daily life. It involves analyzing information, questioning assumptions, and making logical decisions. These abilities help you solve problems, interpret evidence, and communicate effectively.

Adaptability is equally important. In Organic Chemistry, unexpected results require quick thinking and problem-solving, skills that apply to workplace challenges, emergencies, and everyday situations.

Clear communication is another essential tool. Learning to express ideas through lab reports and presentations prepares you for success in competitive job markets.

This course helps you think critically, adapt confidently, and communicate clearly. Are you ready?

TIPS FOR SUCCESS

SUCCESS

My goal is that everyone in Organic Chemistry performs to the best of their ability. However, you should be aware that the primary responsibility for your performance is YOURS. "Chemistry is not a spectator sport."

- **READ your syllabus** for questions about this class.
- **Attend** class regularly & complete assignments such as labs and the Video Lectures on time.
- **Keep a calendar.** Use your phone or computer and set reminders! Budget your time. Do not cram for examinations.
- **READ ahead:** Prepare and read materials before coming to lecture and also lab and ask questions in class.
- **Ask questions** if you do not understand the direction or main points in lecture. Come to office hours and use the CHC tutoring center.
- A number of studies have shown that **careful notetaking** is a major key to understanding lecture material and doing well in college-level courses. An excellent study habit involves rewriting your notes and outlining the chapters as soon after class as possible.
- **Work problems** with the goal of thoroughly understanding what is involved, not just to get an answer. Do the textbook examples and problems along with the study guide.
- The only way to become skilled in OCHEM is to **practice**. Work chemistry problems EVERY DAY. One night of cramming will not make you a skilled problem solver. Only weeks of dedicated practice will allow you to achieve your goals.
- **Think through experiments.** Always consider WHY for each step. Follow directions.
- Always **Check your results** before you leave lab; does it make sense?
- **It is your responsibility** to take advantage of these opportunities. Furthermore, no one is going to nag you to study.

What Stuff do I need?

Required Textbooks & Materials

- Lecture text: **Organic Chemistry**, John McMurry, Cengage Learning
- **Student Solutions Manual** for McMurry's Organic Chemistry (Edition needs to match textbook edition)
- **The Organic Chem Lab Survival Manual**, Zubrick 11th ed.
- **Molecular Model Set** for Organic Chemistry
- **Splash Goggles**
- **Lab Coat**
- **Lab Notebook**



What does your professor recommend using for Lecture?

★ *Hard Copy Option recommended for best learning success* ★

- Lecture text: **Organic Chemistry, 5th Ed.**, John McMurry, buy a hard copy online, you may purchase any edition 5th – 8th edition is ok to use but lecture follows & problems assigned in 5th edition (ISBN 13: 9780534373665).
- **Organic Chemistry Study Guide & Solutions**, Susan McMurry: 5th edition (ISBN-13: 9780534371920 match textbook edition)

Zero Textbook Cost (ZTC): Open Access Textbooks

- Lecture Text: [Organic Chemistry: A Tenth Edition](#) [Links to an external site.](#) from OpenStax, McMurry - View online or download

Note: Get hard copy of 9th edition Study Guide to match – there is no 10th ed.

What do you need for the Laboratory?



- Laboratory Techniques: **The Organic Chem Lab Survival Manual**, Zubrick or E-Text link (paperback 8th – 11th edition all fine to get, even digital version OK. 9th edition ISBN13: 9781118083390; ISBN10: 1118083393)
- **Lab Notebook:** Must be graph ruled and bound- (Composition book OK)

Other Required Materials

- **Chemistry 213 Lecture PowerPoint Slides**, ©2016 K. Boebinger. Posted on Canvas, students print.
- **Chemistry 213 Lab Experiments**, ©2025 K. Boebinger. Posted on Canvas, students print.
- **Template** (hexagon shape needed)
- **Periodic Table** (print yourself from free online site)
- **Calculator** (non-programmable nor graphing)
- **Computer** with Canvas capability
- **Printer** (ink and paper)
- **Scanning Scan** using your phone



Other Free Resources:

- Lecture: [Organic Chemistry Nomenclature Workbook](#)
- Lab: [Organic Chemistry Lab Techniques](#)
- Lab: [How to be a Successful Organic Chemist](#)
- Lecture & Lab : [Introduction to Organic Spectroscopy](#)

What is the required Nomenclature and Reactions Format?

Students are required to follow the formats provided in the lecture text and notes, as they are specifically designed for this course. Using other formats found online may lead to errors and won't be accepted. Stick to the guidelines provided for assignments and exams to ensure accuracy and success.

What to Do When You Have a Question?

Instead of Googling, start by checking the textbook, lecture notes (slides), and Canvas videos. If you're still unsure, feel free to reach out to [me](#) or a CHC Chemistry tutor.

Are you Studying for the for the Level of this Course?

Internet searches often provide information that's not suited to this course or may be incorrect. Always rely on course materials for the most accurate and relevant information. You've got this!

Did you Submit the right Assignment, in the right link, and on time?

Make sure to allow enough time to submit your work before the due date! You are responsible for verifying your submissions on



Canvas. Double-check that what you upload is complete and in the correct assignment link. Late or incorrectly uploaded assignments won't be accepted. Revisit the assignment and click on the link to confirm what you submitted. Give yourself and the computer time to upload—it may take a few minutes. Remember, even one minute late is still late, so plan ahead and manage your time wisely!

What is the Method of Instruction?

This course combines online and in-person learning. Watch lecture videos, complete notes, and submit assignments on Canvas before attending in-person lectures and labs twice weekly. Attendance is mandatory, and active participation will help you succeed!

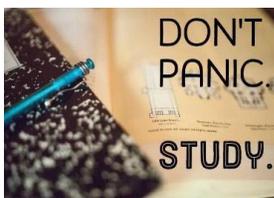


This course combines lectures and labs, and lab information is often covered during lectures. You must attend the lecture before the lab to participate. If you're late, leave early, or miss the lecture, you won't be allowed to attend the lab or submit a report, even with prelab materials submitted on time. There are no makeup labs, so plan your schedule carefully. If the class times don't work for you, consider if this is the right semester to take the course. Your punctuality and attendance are key to your success!

Preparation: Print lecture notes, watch videos, and answer embedded quiz questions (due dates apply; retries allowed). Bring your notes to class for extra practice, discussions and ask questions—your preparation will set you up for success!

Labs: Prelab materials must be submitted on Canvas by 6:30am on lab day. Late submissions result in no lab participation or lab report credit. Lab reports are due before 11:59pm on the last day of the experiment. Arrive on time and prepared—no make-up labs allowed, but your preparation will help you make the most of each session!

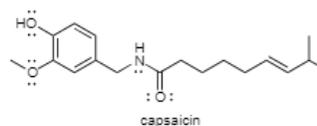
Submitting Work: Submit scanned, handwritten PDFs to the correct Canvas link before the deadline. Double-check your submissions—late or incorrect uploads won't be accepted. Your attention to detail will keep things running smoothly!



Exams: Exams begin at 7:00 AM—arrive promptly. Late arrivals may not take the exam, so plan ahead for parking and traffic. Exams are 50 minutes. Stay focused and prepared to do your best!

Success Tip: Stay organized, manage your time, and come prepared for lectures and labs. You've got this! Keep up the hard work and ask for help whenever needed. We're in this together!

Capsaicin, the compound responsible for the heat in hot peppers, contains phenol, ether, amide, and alkene functional groups.



Academic Integrity

As your instructor, I am committed to treating all students fairly and with respect. I also expect my students to demonstrate courtesy and respect toward me and their classmates. To ensure that final grades accurately reflect each student's abilities, cheating *will not be tolerated*.

What is Academic Integrity?

Academic integrity means upholding high professional standards and ethics in any learning environment. It is the responsibility of everyone in our campus community. Any form of academic dishonesty, regardless of the role a student plays, will result in the same consequences for all parties involved.

Examples of Academic Dishonesty Include:

- Copying another's assignments, labs, exams or any work and claiming it as your own. Allowing others to copy your work.
- Using internet, AI or "homework" sites to help with any assignment.
- Working with others on exams, sharing exam answers, taking screenshots or pictures of exam questions, using outside sources.

A student who compromises their academic integrity by engaging in academically dishonest behavior on any assignment will receive a zero on that assignment and may be referred to a disciplinary hearing, expelled, or receive a failing grade for the course. Cheating, plagiarism, and fabrication are defined in the College Catalog, Schedule of Classes and Crafton Hills College website. Students will be referred to Dean of Student Services for disciplinary actions. If further clarification is required, please feel free to discuss it with me.

CHEM 213 Course Topics by Exam

All exams start at 8:30 am Lecture does not meet on exam days Exam dates can be found in the schedule at the end of this syllabus and also in Canvas.

Exam	Chapters	Topics
1	CH 15 - 16	Benzene and Aromaticity. Chemistry of Benzene: Electrophilic Aromatic Substitution (EAS)
2	CH 17 - 18.6	Alcohol and Phenol. Ethers (part 1)
3	CH 18.7 - 19	Ethers (part 2). Aldehydes & Ketones: Nucleophilic Addition Reactions
4	CH 20 - 23	Carboxylic Acids and Nitriles. Carboxylic Acid Derivatives, Nucleophilic Acyl Substitution reactions. Carbonyl Alpha-Substitution Reactions. Carbonyl Condensation Reactions.
Final	CH 1 - 26	Final Exam is comprehensive with material from CHEM 212 & 213! Final New Material: Chapters 24 & 26 ~ Amines. Biomolecules: Amino Acids, Peptides & Proteins.

GRADING: Your final course grade is based on the unweighted cumulative points earned from all assignments. Not all scores are posted on Canvas. Keep track of assignments and your scores.

To receive a grade of C or higher for the course, regardless of your total points earned, you must have earned more than 70% on all exams. You are required to have a passing grade in the laboratory in order to receive a passing grade for the course. This means a student cannot miss more than 3 laboratory experiments and must earn 70% of the laboratory points to pass the laboratory portion.

The cut off for your letter grade is set and will not change, do not ask to have your grade increased, even if you "miss" a grade by even just one point. Do not ask for late assignments to be accepted, or for extra credit. Do the assigned work on time.

What Points are Possible?	
Homework - Lecture Video Quizzes	50
Homework - Exam Reviews & Worksheets	20
Exams -4 @ 100 points each	400
Course Final Exam	180
Laboratory Experiments & Lab Final	270
Applications Project	60
Total	980

 LETTER GRADES What is the course Grade based on?	
90 - 100 %	A
80 - 89 %	B
70 - 79 %	C
60 - 69 %	D
Below 60 %	F



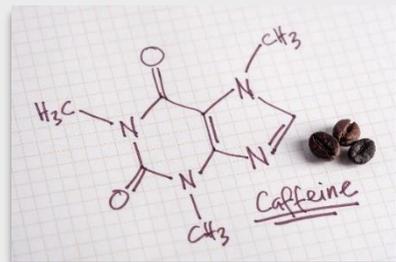
What needs to be included in your Exam Review:

- Completed Exam Review Questions.
- Summary page of nomenclature and functional groups.
- Summary page(s) of reactions.
- Complete any worksheets and/or reviews posted on Canvas.
- Scan all pages as one document- Submit to correct Canvas assignment link on time.
- There are only exam reviews for Exams 1 & 2. The rest is now for you to do for your own benefit.

How to Prepare for Exams

- Read the textbook and complete the problems in the back of each chapter.
- Compile information for each exam: Go through the PPT slides with the focus of just looking for Nomenclature, write notes, and make flashcards. Then go through another time with the focus of just looking for Reactions, write notes, and make flashcards.
- Rewrite your notes, make worksheets, practice with flashcards.
- View the lecture videos multiple times.
- Rewrite reactions and test yourself. Do the worksheets again!
- Ask questions in class, office-hours, at the STEM and Tutoring Centers.

Students need to not only learn and memorize the material, but students also need to be able to apply the information with critical thinking skills to new applications. The ability to solve problems on exams depends mostly upon having a thorough understanding of the material and problems as a result of dealing with them actively yourself, not as a passive spectator in the lecture or a group study session.



What Homework does this class have?

How to Succeed in This Course –

1. **Read the Textbook and Work Problems:** Practice is key! Work on as many problems as needed from each chapter to master the material. While not graded, this is essential for your learning. Tackle problems as we cover the chapter in lecture.
2. **Lecture Video Quizzes:** Watch the Canvas lecture videos while filling in your notes—this should be your second time hearing the material after reading the text. Dedicate 3-5 hours weekly, and if time allows, rewatch the videos. Embedded quiz questions help assess your understanding and retries are allowed for full credit - so plan ahead for deadlines!
3. **Exam Reviews & Worksheets:** Start early! Print them out when new material begins and reference your lecture slides as you go. This will help you stay organized and focused.
4. **Review Everything Again!** Set aside 3-6 additional hours weekly to rewrite notes, rewatch videos, redo worksheets, and practice reactions, nomenclature, and functional groups. Consistency and repetition are your keys to success! You've got this!

"I Hate Homework" – Let's Make It Manageable! Homework helps you master the material. Start by reading the textbook and watching lecture videos, then work through chapter problems—check your answers using the study guide. Struggling? That's okay! Identify tricky concepts and get help early in tutoring or office hours. You've got this—keep practicing!

What do I need to know about Exams?

- There will be four lecture examinations and a *comprehensive* final exam during the semester. All exams must be taken on campus during the scheduled time, no exam will be given online. Exams will have a **time limit of 50 minutes**.



- **No exam will be dropped**
- There will not be any make-up allowed for any missed exams.
- On examinations and the final, you will be responsible for anything covered in the reading assignments in the lecture notes, textbook, anything discussed in lecture and/or videos, anything posted in Canvas, and anything covered in the laboratory portion of the course. (Note: CHEM 213 exams are comprehensive over the year and include CHEM 212 material).
- The final exam is scheduled by the administration of the college and is not subject to change. Please arrange your end of the semester travel plans for **after** the final exam.
- **You are required to earn an average of 70% on all lecture exams to earn a passing grade.**

How do I prepare for Lab?



Before you come to the lab: Go over what is posted on Canvas for the experiment.

Read the entire experiment with an understanding of the experiment and what you need to do. I will not tell you how to do the experiment step by step.

Read all applicable chapters in the Zubrick Lab text.

Come to **office hours** if you have questions.

Complete all the prelab Assignments (material) and post to Canvas before it is due. If the prelab is not submitted or is late, the student will NOT be able to do the experiment, they will earn a zero score and there is no lab make-up.

Be on time for all classes. Late students will not be allowed to complete the experiment.

NO LATE work is accepted. Plan ahead.

Underprepared students will be asked to leave the lab – no make-up. This is a lecture/lab course, lab information is discussed during lecture. Students are required to be on time and attend the in-person lecture that meets before the lab to attend and participate in the laboratory part of the course.

Any student that arrives late, leaves for an extended time during class, leaves early, or misses the lecture will not be allowed to attend the lab nor turn in a lab report - even if the prelab materials are submitted on time. Nor may not turn in reports for experiments they did not fully attend.

What do I need to know about the labs and experiments?

This is a lecture/lab course, lab information is often discussed during lectures. Students are required to be on time and attend the in-person lecture that meets before the lab to attend and participate in the laboratory part of the course.

A detailed lab schedule, including experiment dates, due dates, and exam dates, is at the end of the syllabus. Be on time for **in-person lectures before labs**, as lab details are discussed during lecture and attendance is required to participate.

Refer to the **CHEM 212 Introduction Experiment** for important details about lab procedures, expectations, and the grading system. Most experiments, when completed correctly and submitted on time, will be graded on a **20-point basis**. To pass the course, you must:

- Earn at least **70% of lab points**.
- Miss no more than **3 labs**.

You will complete a **lab notebook** and **lab reports** using the data collected in each experiment. All lab work must be handwritten, scanned as a **single, clear PDF document**, and submitted to the correct Canvas link **on time**. Late or incorrect submissions will not be accepted for grading.

Be sure to give yourself and the computer enough time to upload your assignment submission. Canvas time stamps all submissions and know that even 1 minute late... is late, plan your time wisely.

You are responsible for understanding the information in your lab text -**Organic Chem Lab Survival Manual** (Zubrick) is your essential guide for lab techniques, safety, and theoretical concepts. Stay organized, manage your time, and check Canvas submissions carefully. You've got this!

GOGGLES AND A LAB COAT ARE REQUIRED TO BE WORN AT ALL TIMES WHEN IN THE LABORATORY WHILE AN EXPERIMENT IS OCCURRING, FAILURE TO WEAR EITHER WILL RESULT IN YOU BEING ASKED TO LEAVE THE ROOM.
-NO LAB MAKE-UP.



Are there Formal Lab Reports? NO 😊

Is there a Lab Final Exam? Yes 😊

Laboratory Final Exam: At the end of the semester, you will be given a laboratory examination which will assess your understanding of the laboratory such as techniques, equipment, and calculations that have been utilized during the semester.

How do I Request SAS Accommodations?

Crafton Hills College complies with the Americans with Disabilities Act. If you need accommodations due to a documented disability, please contact Student Accessibility Services (SAS): [Website Link](#), Location on campus in CCR-101 [Campus Map](#), or phone: 909.389.3325, TTY Number: 909-794-4105, or Email: chc_sas@craftonhills.edu

Requests for SAS special arrangements for exams must be properly documented and submitted to the instructor 7 business days prior to the exam. Students must submit completed and approved SAS form to the instructor via campus email, do not rely on SAS to submit to instructor. Students should verify instructor received form. Submitted documents are good for the rest of the semester; students must resubmit documentation each semester.

How can two minutes of your time improve your grade?



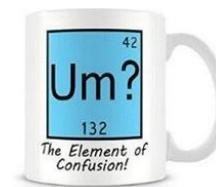
If you spend the two minutes before class skimming your lecture notes from the previous class, you will comprehend the lecture significantly better. And better comprehension in class will help your grade.

Interval Training for Scientists

Did you know that short, intense study sessions are more powerful than long study sessions? A 15-minute intense study session teaches your brain to focus. It lets you build study stamina. It gives you the time to master a concept. An intense study session is one without phones, computers, music, or friends.

If you are feeling overwhelmed....

Come to my office for help. I want you to succeed and I know that by working together, we may improve your grade and decrease your stress.



Dropping the Course

If you decide to drop, **officially withdraw** through Admissions and Records. College requires planning, accountability, and commitment—but you can do this! Stay organized, communicate early, and show up ready to succeed. 😊

What is the CHEM 213 Course Description & Outline?



Organic Chemistry II: Prerequisite CHEM 212

Second semester of a two-semester organic chemistry sequence. Study of modern organic chemistry including structure, nomenclature, reactivity, synthesis, and reaction mechanisms.

Spectroscopy and modern theoretical concepts studied. Lab techniques of purification, isolation, synthesis reactions, and spectroscopic analysis.

Course Outline

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

1. Recognize and name aromatic compounds, amines, esters, ethers, carbohydrates, carboxylic acids, organohalides, alcohols, aldehydes, and ketones.
2. Recognize and predict reactions involving aromatic compounds, amines, esters, ethers, carbohydrates, carboxylic acids, alcohols, aldehydes, and ketones.
3. Recognize and utilize name reactions in synthesis reactions.
4. Interpret and compare acid dissociation constants in order to predict the outcome of possible reactions.
5. Perform multistep synthesis of an organic molecule.
6. Perform characterization of organic molecules using traditional lab techniques such as melting point determination or TLC.
7. Identify chemical compounds synthesized in the laboratory using spectroscopic data such as Mass Spectrometry (MS), Infrared (IR), Nuclear Magnetic Resonance (NMR, H and/or C), and Ultraviolet (UV) spectra.
8. Perform traditional separation and purification techniques such as distillation, isolation, extraction, and recrystallization.
9. Analyze and perform calculations such as theoretical yield and percent yield of synthesized product using acquired laboratory data.





What are the Student Learning Outcomes (SLOs) for the course?

Upon successful completion of General Organic Chemistry, students will acquire:

1. The ability to distinguish, construct and compare organic compounds utilizing structure, physical properties, nomenclature, synthesis, and reactions.
2. Comprehension and use of laboratory skills in synthetic, quantitative, and instrumental methods as scientific approaches to gathering and verifying knowledge.
3. Critical thinking in chemistry including interpretation, evaluation, explanation, and critical inquiry; how to ask appropriate questions, gather relevant information efficiently and creatively, sort through this information, reason logically from this information and come to reliable and trustworthy conclusions.
4. The ability to collect, analyze, and articulate results clearly and effectively in speech and in writing in an acceptable style of presentation. The ability to follow directions given both in written and oral form.

How are SLOs assessed?

Student assessment is evaluated by means of course participation in exams, quizzes, homework, laboratory reports, and a comprehensive final.

Course Policies

Attending class helps you stay on track, interact with peers, and demonstrate commitment to your education. Active participation in lectures, labs, and assignments is required.

- **Missing Class:** If you miss Day 1, Day 2, or two or more on-campus meetings, you **may be dropped**. Excessive absences (6% or more of class time) could also lead to being dropped. If you stop attending, it's your responsibility to officially drop the course.
- **Labs:** Arriving late, leaving early, or missing prelab instructions counts as an absence, and you won't be able to submit lab reports. **No make-up labs** are allowed except for a **documented emergency** (one per semester, e.g., doctor's note).

Late Work & Exams

- **Late Work:** Assignments **must be submitted on time**. Start early to avoid last-minute issues. **No late work** will be accepted except in documented emergencies communicated before the due date.
- **Exams:** You cannot miss exams or the final. No exam will be dropped. You must:
 - Earn **70% on average on all exams** to pass the course.
 - Take the **final exam** to pass.

Preferred Communication:

How to Reach Me:

I'm here to help! You can ask questions during **class, labs, or office hours**. Outside of those times, my preferred method of communication is **email**. Please email me at kboebinger@craftonhills.edu using your campus email or the Canvas Inbox. I typically respond within **48 hours** (often faster), except weekends, holidays, or campus closures.



- **Important:** Use email for scheduling, general questions, or course-related issues—not for chemistry instruction or questions. Questions about course content need to be asked **in person** during class, labs, or office hours. Also, do not use Canvas assignment comments for communication—they're only for assignment feedback and I rarely see it. Email me.

How I Reach You:

Check your CHC email & Canvas Announcements regularly! I'll share important updates through Canvas Announcements. You can also adjust Canvas notifications to send messages to another email or as texts.



Stay connected, ask questions in person, and take advantage of the help available—I'm here to support you! 😊

This syllabus is a guide and not a legal contract between the instructor and the students. The instructor reserves the right to make changes to the syllabus at their discretion, especially in the event of an emergency remote situation. Students are welcome to ask questions about the syllabus at any time. However, it is the responsibility of the students to save a copy of the syllabus as the instructor may not provide one after the course is completed.

APPLICATION PROJECT – POSTER SESSION - Total Points: 60

**Key Due Dates**

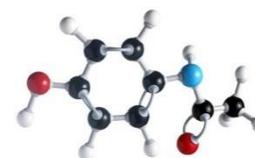
- **Topic Approval:**
 - **Due:** Wednesday, **March 4th** (each day late = -5 points).
 - **How to Submit:** Post your chosen organic compound on the **Discussion Board in Canvas**. **Only one compound per student**—claim early!
- **Poster Submission:**
 - **Due:** Before Wednesday, **April 29th** at **7:00 AM** in CYN-104.
- **Poster Session (Mandatory Attendance):**
 - **Date:** Monday, **May 4th**, **7:00 AM – 11:55 AM**.

Poster Session Overview

- Present your poster in the lab along with a model of the compound.
- You will evaluate two other presentations as part of your grade.
- Be prepared to give a brief presentation and answer questions from others.
- Attendance is mandatory. Absence will result in a 50%-point deduction for the poster if already submitted on time and loss of evaluation points.
- Professional dress is highly recommended.

Project Components

1. **Research**
 - Minimum of **3 sources** (2012 or later) from scientific journals, books (one textbook ok), or government/educational websites.
 - Prepare a **bibliography** and describe **credentials** of at least 3 authors.
2. **Applications**
 - Apply **6 topics** from CHEM 212/213 to your compound.
 - **Application 1:** Physical properties (required).
 - Additional applications at your discretion, but **spectroscopy is separate**.
3. **Illustrations**
 - Include visuals like molecular model of the compound, structures, chemical reactions etc.
 - Ensure all visuals are **labeled** clearly and professionally.
4. **Spectroscopy**
 - Present and explain spectra (e.g., IR, NMR, MS).
5. **Explanation**
 - Explain the **key chemical concepts** behind your topic.
6. **Importance**
 - Discuss the **importance** of your compound and its application to organic chemistry.

**Abstract**

- **Length:** 100–200 words (one paragraph).
- **Content:** Concisely summarize your research purpose, data, and conclusions.
- **Label clearly** on your poster.

Success Tips

- **Start early** to claim your topic on Canvas.
 - Follow all guidelines and rubric for full points.
 - **Attend** the poster session for credit!
- Good luck, and I look forward to seeing your work!

Sample of peer evaluation form that is required:

	Applications Project Evaluation Form	Rating: 1=poor 4=best	Comments/Notes
Research	Are there: 3 sources of current reliable information, bibliography, credentials of the authors?		
Application	Are there a minimum of 6 CHEM 212, 213 applications?		
Illustrate	Are these illustrated and labeled clearly: molecular structures, chemical reactions, synthesis reactions, graphs, or other diagrams, and the model?		
Spectroscopy	Are there relevant spectra presented and clearly labeled and explained?		
Explain	Are key concepts explained clearly?		
Importance	Is the importance of this application of organic chemistry clearly explained?		

Spring 2026 CHEM 213 Tentative Laboratory & Exam Schedule

Submit in Canvas assignment link before it is due:

Prelab: Before 6:30am on day of experiment
Lab Reports: Before 11:59pm on last day of experiment

Exam 1 & 2 Reviews: Before 7:00am on day of exam
(Lecture doesn't meet on exam day)

Lab Day	Date	Exp #	Topics	Report Due
M	Jan 19	--	<i>Martin Luther King Jr. Day Campus Closed</i>	--
W	Jan 21	15	Laboratory Check-in/ Safety Lecture EXP 15 Spectroscopy Unknowns	Sat Jan 24
M/W	Jan 26/28	16	Synthesis of <i>t</i> -cinnamic acid - Characterization & Spectroscopy	Jan 28
W	Feb 2	17	EAS Nitration - Characterization & Spectroscopy	Feb 2
W/M	Feb 4/9	18	EAS Friedel-Crafts Acylation - Characterization & Spectroscopy	Feb 9
W	Feb 11	--	Wed. EXAM 1 (CH 15 - 16) @ 8:30 - Exam review due in Canvas before 7am	--
M	Feb 16		<i>Campus Closed – President's holiday – no office hours</i>	--
W	Feb 18	GC1	GC1 – Ethyl acetate synthesis	Feb 18
M/W	Feb 23/25	19	Hydroxyl Group – Reaction & Properties - Characterization & Spectroscopy	Feb 25
M	Mar 2	20	Synthesis of Alkenes - Characterization & Spectroscopy	Mar 2
W	Mar 4	--	Wed. EXAM 2 (CH 17 – 18.6) @ 8:30 - Exam review due in Canvas before 7am	--
M/W	Mar 9/11	21	Reduction of Ketone to Diol - Characterization & Spectroscopy	Mar 11
Spring Break 2025 March 16-21				
M	Mar 23	22	Aldehyde & Ketone Groups – Reaction & Properties - Characterization & Spectroscopy	Mar 23
W/M	Mar 25/30	23	Identification of OCHEM Unknowns	Mar 30
W	Apr 1	--	Wed. EXAM 3 (CH 18.7 – 19) @ 8:30 – No Exam Review Due	--

Spring 2026 CHEM 213 Tentative Laboratory & Exam Schedule

Submit in Canvas assignment link before it is due:

Prelab: Before 6:30am on day of experiment
Lab Reports: Before 11:59pm on last day of experiment

Exam 1 & 2 Reviews: Before 7:00am on day of exam
(Lecture doesn't meet on exam day)

Lab Day	Date	Exp #	Topics	Report Due
M/W	Apr 6/8	24	Mixed Aldol Condensation - Characterization & Spectroscopy	Apr 8
M	Apr 13	25	Soap – Synthesis & Properties - Characterization & Spectroscopy	Apr 13
W	Apr 15	26	Proteins & Amino Acids & Lab Drawer check-out	Apr 15
M	Apr 20		Applications Project Poster Prep & Exam Prep	
W	Apr 22	--	EXAM 4 (CH 20 - 23) @ 8:30 – No Exam Review Due	--
M	Apr 27	--	Applications Project Poster Prep	--
W	Apr 29	--	Applications Poster Due @ 7:00am	--
M	May 4	--	Applications Poster Session	--
W	May 6	--	Lab Final opens & Exam Prep	--
M/W	May 11/13	--	Final Exam (CH 1 - 26) Mon May 11 @ 8:30am Lab Final Due Wed May 13 before 9:00am	

Exam Dates

*All exams start at 7:00 am
Lecture does not meet on exam days*

1	CH 15 - 16	W	Feb 11
2	CH 17 – 18.6	W	Mar 4
3	CH 18.7 - 19	W	Apr 1
4	CH 20 - 23	W	Apr 22
Final	CH 1 - 26	M/W	May 11/13

APPLICATIONS PROJECT Key Due Dates

See detailed Application Project Info on Canvas and this syllabus

Claiming Compound on Canvas DB	W	Mar 4, 11:59pm
Turn in Poster CYN 104	W	Apr 29, 7:00am
Poster Session – Mandatory Attendance	M	May 4, 7:00am

Campus Closed: Mon Jan 19, Feb 6 & 16, Spring break M-S Mar 16 - 21