

	Honors TAP Committee Agenda		Monday, October 26, 2026 Mesquite Hall (MH) - 246 2:30-4:00 PM
Type of Meeting: Regular Note Taker: Towana Catley			Please Review/Bring: Agenda Packet & Minutes
<i>Committee members:</i> Towana Catley, Faculty Co-Chair Dr. Darcy Wiewall, Faculty Co-Chair Dr. Jedidiah Lobos, Dean MSE, Administrative Member Carla Corona, Arts & Humanities Dietra Jackson, Counseling Kristal Ibrahim, Counseling Elinda Parkinson, Health & Safety Sciences Jacqueline Seekamp, Library Kaitlin Bessinger, Math Sciences Engineering Pavinee Villapando, Math Sciences, Engineering Greg Langner, Language & Communication Arts		Dr. Matthew Jaffe, Social & Behavioral Sciences Alberto Mendoza González Larreynaga, Social & Behavioral Sciences Dr. Rachel Jennings-Tafarella, At-Large Vejea Jennings, Ex-Officio John Vento, Ex-Officio Daniel McCabe, Adjunct Representative Shannon Hyman, ASO Student Representative Bianca Nichols, Honors TAP Student Representative OPEN, Aerospace, Industrial Arts & Applied Technologies OPEN, Athletics & Kinesiology OPEN, Math Sciences Engineering	
	Person	Action	
I. Call to Order and Roll Call	Towana & Darcy		
II. Open Comments from the Public			
III. Approval of Agenda Approval of Agenda – October 26, 2026	All		
IV. Approval of Minutes Approval of Minutes – September 28, 2026	All	<u>Issues Discussed:</u> <u>Action Taken:</u> <u>Follow Up Items:</u>	
V. Informational Items Winter/Spring Honors Classes	All		
VI. Report	All	<u>Issues Discussed:</u> <u>Action Taken:</u> <u>Follow Up Items:</u>	
VII. Action Item - Honors Option Proposals - Schroer, CHEM 210	All	<u>Issues Discussed:</u> <u>Action Taken:</u> <u>Follow Up Items:</u>	
IX. Discussion - Honors Option Proposals - Schroer, CHEM 210 - Fall Honors Mixer October 28, 3-5pm UH 223 - Honors TAP Handbook Draft - Outstanding Honors Option Proposals	All	<u>Issues Discussed:</u> <u>Action Taken:</u> <u>Follow Up Items:</u>	
Adjournment			
NEXT MEETING DATE: November 23, 2026			

Honors TAP Option by Contract Instructor Proposal

INSTRUCTOR USE ONLY: By agreeing to offer an honors option to honors students, you agree to fulfill the high standards of the honors program and to submit all appropriate paperwork by the deadlines in order for the student to get honors credit for your course. Your project must be approved by the honors coordinator/committee. The following criteria will help us to determine if the project meets honors option criteria and standards. Please be very detailed and specific in your responses. The form below will help you to design an appropriate proposal for consideration. Please fill out completely and with ample details. You only need to fill out this form once for a particular course. Honors Option projects do not figure into the grade for the course, but they should be done to a high standard. Honors option work is intended to enrich the course content that encourages students to go above and beyond the course. If an instructor wants to grade the project, CREDIT or NO CREDIT should be used. Instructors reserve the right to deny the opportunity of an honors option.

Faculty Name: Dr. Alexandra Schroer

Course Title and Number: Chemistry 210, Organic Chemistry

Check which of the following honors objectives will be met by the proposed course? Select all that apply.

- ☒ Option will provide content about the history or background of the field being studied.
- ☒ Option will show an awareness of some of the field's major theories or current trends.
- ☒ Option will require students to perform a case study, field experience, or other research projects.
- ☒ Option utilizes research methods including proper documentation for the discipline.
- ☒ Option will help students to demonstrate critical thinking and/or meta-cognitive abilities.
- ☒ Option will focus on performance activities.

1. Please provide an overview of the proposed option. Be sure to show how it differs from what other students do in your course.

The proposed honors option will provide the student with an in-depth investigation of **spectroscopic methods used to identify the structures of unknown organic compounds**, with an emphasis on nuclear magnetic resonance (NMR) and infrared (IR) spectroscopy. The student will learn how NMR spectroscopy is used to obtain structural information about organic molecules and how IR spectroscopy can provide complementary evidence regarding the functional groups present in an unknown compound. The student will analyze unknown organic compounds using multiple forms of spectroscopic evidence and use the combined results to propose and justify molecular structures. This project will go beyond the normal requirements of Organic Chemistry 210 by requiring the student to independently work with experimental data, analyze unknown compounds, conduct outside scientific research, and prepare a formal scientific report describing the methods, results, and reasoning used to identify the compounds. Rather than only learning how to interpret spectra in the context of regular coursework, the honors student will apply spectroscopy as an investigative tool to solve unknown structures and evaluate whether multiple sources of experimental evidence support the same conclusion. This expands on the previous Organic Chemistry honors project, in which NMR and IR were used together to identify unknown compounds.

2. Describe how the option will strive for a high degree of student participation and involvement.

The honors option will require active student participation throughout the semester. The student will meet regularly with the instructor to discuss progress, experimental results, problems encountered during analysis, and the next steps of the project. The student will learn how to operate or interpret data produced by NMR spectroscopy and will gain experience working with organic compounds and spectroscopic data.

Rather than being given the identity of an unknown compound, the student will be responsible for evaluating the available evidence and developing a scientifically supported identification. The student will compare NMR and IR results, eliminate structures that are inconsistent with experimental evidence, and explain why the remaining structure provides the best fit. This approach places the student in an active role like the inquiry-based model used in the previous Chemistry honors proposal, where students were expected to analyze data, construct their own understanding, and discuss their findings with the instructor.

3. List specific meeting dates, deadlines and tasks [e.g., week#].

Weeks 1–2: Meet with the instructor to discuss the honors project, expectations, laboratory safety, research question, and background of NMR and IR spectroscopy.

Weeks 3–4: Complete background research on NMR and IR spectroscopy and begin reviewing scientific literature related to spectroscopic identification of organic compounds.

Weeks 5–7: Learn appropriate procedures for collecting and/or interpreting NMR and IR data. Begin analysis of the first unknown compound.

Weeks 8–10: Analyze additional unknown compounds and compare multiple types of spectroscopic evidence. Meet with the instructor to discuss interpretations and troubleshoot inconsistencies.

Weeks 11–12: Complete experimental work and finalize the proposed structures of the unknown compounds. Organize spectra, observations, and supporting evidence.

Weeks 13–14: Analyze the complete results and begin preparing the scientific report. Compare experimental findings with information obtained from scientific literature.

Weeks 15–16: Submit the final scientific report and discuss the overall findings with the instructor.

This schedule expands upon the earlier Organic Chemistry honors model, which involved weekly instructor meetings, laboratory work, NMR training, continued monitoring of experimental findings, and submission of a final report during the last week of the semester.

4. What activities, assignments, or readings will provide greater depth and breadth of subject matter?

The student will complete supplemental readings on the theory and application of NMR and IR spectroscopy, including appropriate scientific journal articles and other instructor-approved scientific sources. These readings will provide greater depth regarding how spectroscopy is used in organic chemistry to determine molecular structures.

Laboratory and analytical activities will include interpreting ^1H NMR and ^{13}C NMR spectra, examining chemical shifts and molecular symmetry, and using IR spectra to identify or confirm functional groups. When available and appropriate to the instrumentation and course, additional NMR techniques such as DEPT, COSY, or heteronuclear correlation methods may also be examined. The earlier Organic Chemistry honors project demonstrated how these different spectra can provide complementary structural information, with IR serving as an additional method for verifying proposed functional groups.

The student will therefore move beyond simply identifying peaks on a spectrum and instead integrate multiple forms of evidence to determine an unknown molecular structure

5. Describe writing assignments and discuss how the course will foster critical thinking.

The primary writing assignment will be a **formal scientific research report** documenting the student's investigation of unknown organic compounds. The report will include an introduction explaining the scientific background of spectroscopy, a description of the methods used, presentation and interpretation of experimental results, discussion of the proposed molecular structures, and a conclusion summarizing the evidence supporting each identification.

Critical thinking will be emphasized throughout the project because spectroscopic interpretation requires the student to develop possible molecular structures and evaluate them against experimental evidence. For example, an NMR spectrum may suggest several possible structures, but the student will need to determine whether the number of signals, chemical shifts, splitting patterns, integrations, carbon environments, and IR functional-group evidence are consistent with each possibility. Structures that contradict the evidence must be rejected and the student must justify the final identification. This reflects the broader honors goal of requiring students to analyze evidence rather than simply receive information, which was also emphasized in the General Chemistry honors proposal through research, experimentation, interpretation, and scientific writing.

6. Explain research opportunities, documentation style, and/or how primary/secondary sources will be utilized.

The honors project will introduce the student to both **experimental research and scientific literature research**. Primary sources, particularly peer-reviewed journal articles, will be used to investigate the theory and modern applications of NMR and IR spectroscopy in organic chemistry. Appropriate secondary sources may be used to establish foundational concepts and provide additional background. The student will be expected to evaluate scientific sources rather than simply summarize them. Readings will be considered in terms of their purpose, evidence, methodology, and relevance to the student's experimental work. This follows the research model of the previous Chemistry honors proposal, in which students analyzed supplemental articles, considered the evidence presented by authors, connected readings to course concepts, and regularly discussed their findings with the instructor.

Sources will be properly documented using a consistent scientific citation format approved by the instructor. The final report will clearly distinguish between information obtained from published literature and conclusions drawn from the student's own experimental observations.

7. Do you intend to provide this honor option for an asynchronous class? If so, please explain how effective contact will take place.

If Organic Chemistry 210 is not asynchronous:

No. This honors option is intended to involve regular direct interaction between the student and instructor. The student will meet with the instructor throughout the semester to discuss scientific literature, experimental procedures, spectroscopic results, interpretation of unknown compounds, and progress on the final report. Laboratory work and spectroscopy-related activities will provide additional opportunities for direct instructor guidance.

8. Overall, please describe how this honors option by contract project will benefit the honors student.

This honors option will benefit the student by providing experience with organic chemistry that extends beyond the standard course curriculum. The project will allow the student to apply concepts learned in Organic Chemistry 210 to a research-style problem in which the identity of an organic compound must be determined from experimental evidence. Through NMR and IR spectroscopy, the student will develop a stronger understanding of the relationship between **molecular structure and experimental data** while gaining experience analyzing and interpreting scientific results.

The project will also strengthen skills that are important for advanced coursework and scientific research, including literature review, laboratory techniques, data interpretation, scientific reasoning, problem-solving, and formal scientific writing. Most importantly, the student will learn to combine multiple forms of evidence to support or reject possible molecular structures rather than relying on a single result. The final project will therefore provide experience with the process of scientific investigation while allowing the student to explore spectroscopy at a greater depth than is normally possible within Organic Chemistry 210.