

The Honors-in-Discipline Program

Department of Chemistry

East Tennessee State University

The Honors-in-Discipline program at the Department of Chemistry is designed to provide an enhanced program of study for chemistry majors who seek a challenging and stimulating college experience. Students enrolled in any major concentrations in chemistry may participate in this program. Chemistry is an experimental science and we believe that the lab experience is the underpinning, which illustrates chemical principles and generates enthusiasm. Thus the program seeks to:

1. Enrich students' experience in chemistry by providing challenging opportunities in and beyond the classroom.
2. Involve students in independent research so that they can experience the inquiry and satisfaction of scientific discovery.
3. Develop mentoring relationships with faculty and peers through small group interactions in classes and research projects.

Admission

The HID program in the Department of Chemistry reviews application on a rolling basis. If accepted, the student will be admitted to the program during the next Fall or Spring semester. However, to be considered for scholarship from ETSU Honors College, your application must be received no later than **March 1st** for the Fall, and **November 1st** for the Spring semester. The minimum requirements for admission are:

- Entering freshmen must have a High School GPA of 3.5 or higher, or an ACT composite score of 25, or a SAT score of 1130.
- ETSU students entering after freshman year must have an overall GPA of 3.4 or higher, and a GPA of 3.6 or higher in chemistry.
- Transfer students must have an overall GPA of 3.4 or higher, and a GPA of 3.6 or higher in chemistry. The transfer should be no later than the completion of the sophomore year.

Retention

To remain in the program, students must be registered for a minimum of **15 credit hours per semester** except for **one thesis semester** when the load can be reduced to **12**. Additionally HID students must maintain a minimum **GPA of 3.25 each semester**, and a minimum **cumulative GPA of 3.4**. A minimum of **12 credit hours** of Honors courses in chemistry must be completed from the following selection, within which at least 2 credit hours must be from upper division courses (CHEM 3XXX or higher). In addition, each student must complete 6 credit hours of Honors Senior Thesis (CHEM 4018-088) in conjunction with an ETSU faculty member. All students must enroll in Honors Introduction to Research (CHEM 3008-088). We envision entering freshmen will take the General Chemistry sequence followed by higher level courses. Students entering the program in the second year (after General Chemistry) may start with the Honors Organic Chemistry Lab. We recommend completing the required 12 credit hours by the end of the junior year, so that the senior year can be reserved for the Senior Thesis (CHEM 4018-088) requirement.

At the beginning of each semester each HIC student must report to the director his/her progress using the checklist. The Honors College will also update the record for each HID student. Students with unsatisfied performances (**low term or cumulative GPA**) will be notified and placed on academic probation for one semester. Students who fail to achieve a minimum grade of B in **Honors Senior Thesis** (CHEM 4018-088) will be dismissed from the program. Two weeks before the first day of registration each semester, each Honors student must report to HID director the plan of enrollment for the next semester.

- Honors General Chemistry Labs: CHEM 1111-088 (1 credit), CHEM 1121-088 (1 credit)

Students may enroll in any of the General Chemistry lecture sections plus the Honors lab section for each semester. The Honors section of lab will offer students the opportunity to study chemical phenomena in an independent and investigative manner. The prerequisite for this lab sequence is AP chemistry or equivalent background in high school. Lab notebook in appropriate scientific manner and formally written lab reports will be required.

- Honors Organic Chemistry Lab: CHEM 2021-088 (2 credits)
- Honors Quantitative Analysis Lab: CHEM 2221-088 (2 hours)

These labs consist of experiments which provide students with the opportunity to explore organic and analytical chemistry in greater depth and in a broader scope. The selected experiments will have relevance to everyday life and provide an exciting learning experience under the guidance of supervising faculty. Formal lab reports will enhance the writing skills of the students. We recommend that these courses be taken in conjunction with Organic Chemistry and Quantitative Analysis.

- Honors Introduction to Research: CHEM 3008-088 (2 credits)

All Honors students must complete this course, and it is required during the fall semester of the junior year. The students will be responsible for scheduling personal interviews with at least 4 faculties from different areas during the first half of the semester, and choosing a research advisor. The second half of the semester will involve thorough searching of the literature in preparation for beginning the Honors research project. Students will outline a plan and prepare a proposal of their research projects, and present it to the class. All research projects must be approved by chosen research advisor and the director of the Honors-in-Discipline program.

- Honors Introductory Integrated Lab: CHEM 3611-088 (2 hours)
- Honors Adv. Integrated Lab: Dynamics, CHEM 4611-088 (2 hours)
- Honors Adv. Integrated Lab: Structure, CHEM 4621-088 (2 hours)
- Honors Adv. Integrated Lab: Analytical Techniques: CHEM 4631-088 (2 hours)

The purpose of the Integrated Labs is to engage students in experiments and help them see connections between the different areas of chemistry. In addition, this will give students the opportunity to conduct specific experiments in the format with more open inquiry.

- Honors Seminar in Chemistry: CHEM 4010-088 (2 credits)

The first goal of the course is that students learn the skills necessary to read, interpret, and critique scientific journal articles. The second goal is that students learn how to present the findings of a research. The instructor will assign various articles to the students to read and interpret, followed by a group discussion lead by the instructor. This will expose the Honors students to various divisions and highlight significant discoveries in chemistry. The course will also involve students' presentations to the class. Each student will complete at least one presentation during the semester involving an overview of a research project and leading a discussion of the findings.

- Honors Senior Thesis: CHEM 4018-088 (3 credits)

All Honors-in-Chemistry students must complete a Senior Thesis as a capstone course. A total of 6 credit hours are required over two regular semesters immediately following the semester students take CHEM 3008. This will involve original research completed with a faculty research advisor. The project and research advisor should be chosen during the junior year with a written proposal completed in the CHEM 3008 course. The student is required to submit a formal thesis, and give an oral presentation upon completion of the project. In addition to the faculty research advisor, two faculty members will serve as a committee to review the thesis and oral presentation.

Graduation

1. Complete all department degree requirements.
2. Complete 12 credit hours of Honors courses (excluding CHEM 4018-088) with minimum 2 credit hours from upper division courses.
3. Complete 6 credit hours of Senior Thesis (CHEM 4018-088).
4. Complete thesis based on the research project.
5. Complete oral presentation in the department or through a professional setting.

Financial Aid

Financial aid may be available for both in-state and out-of-state participants from ETSU Honors College. See Honors-in-Discipline program information on the Honors College web site: https://www.etsu.edu/honors/hid_scholars/

For additional information or application forms, please contact:

Dr. Marina V. Roginskaya
Department of Chemistry
P.O. Box 70695
East Tennessee State University
Johnson City, TN 37614

Email: roginska@etsu.edu
Phone: +1-423-439-6917
Fax: +1-423-439-5835