

DEPARTMENT OF CHEMISTRY AND PHYSICS

The Department of Chemistry and Physics offers major programs in chemistry and physics leading to the Bachelor of Arts or Bachelor of Science degree, minors in both chemistry and physics, supporting coursework for other major programs and pre-professional curricula, coursework applicable to physical science requirements in the general studies components, and the cooperative programs described below. The department also provides the subject field for the preparation of secondary teachers of chemistry offered through the College of Education and Human Sciences. Students with majors in chemistry as a teaching field for education certification are required to take an exit examination for graduation.

The professional chemistry option has been approved by the American Chemical Society since 1973 and is designed especially for students who wish to prepare for industrial chemistry or for graduate study in chemistry. Requirements for the professional chemistry option include prescribed ancillary courses in computer science, mathematics, and physics.

The professional biochemistry option is approved by the American Chemical Society and designed for students who wish to prepare for graduate study in biochemistry, or a related professional school such as medical, pharmacy, or dental school. Requirements for the professional biochemistry option include prescribed ancillary courses in biology, computer science, mathematics, and physics.

The general chemistry option is designed for students who wish to take a general major in chemistry or to satisfy pre-professional requirements for medicine, dentistry, medical technology, and similar programs. Requirements for the general chemistry option include prescribed ancillary course-work in computer science, mathematics, and physics.

The basic sequences in chemistry are Introductory Chemistry (CH 101)-Introductory Chemistry Laboratory (CH 101L) and Introduction to Organic and Biochemistry (CH 102)-Introduction to Organic and Biochemistry Laboratory (CH 102L) or General Chemistry (CH 111)-General Chemistry Laboratory (CH 111L) and General Chemistry (CH 112)-General Chemistry Laboratory (CH 112L) as determined by the particular program to be followed. Students who do not have a high school preparation in chemistry must take Introductory Chemistry (CH 101)-Introductory Chemistry Laboratory (CH 101L) as the first courses, to be followed either by Introduction to Organic and Biochemistry (CH 102)- Introduction to Organic and Biochemistry Laboratory (CH 102L) for students whose programs require these courses or only a year of physical science, or by General Chemistry (CH 111)-General Chemistry Laboratory (CH 111L) for students whose programs call for General Chemistry (CH 112)-General Chemistry Laboratory (CH 112L). For programs requiring General Chemistry (CH 112)- General Chemistry Laboratory (CH 112L), students with one or more units of high school chemistry enter General Chemistry (CH 111)-General Chemistry Laboratory (CH 111L) as the first courses. Credit in Introductory Chemistry (CH 101)-Introductory Chemistry Laboratory (CH 101L) and Introduction to Organic and Biochemistry (CH 102)- Introduction to Organic and Biochemistry Laboratory (CH 102L) may not be applied to the minimum hour requirements for major or minor programs in chemistry. Special provision is made for advanced placement in chemistry through CEEB Advanced Placement

Examinations or through CLEP testing. (See Advanced Placement Examinations and CLEP)

The Professional Physics option of the physics major is designed especially for students who anticipate pursuing further studies in physics beyond the bachelor's degree. It is a rigorous program that aims at preparing students to meet the challenges of graduate studies in physics.

The General Physics option of the physics major is designed for students who anticipate seeking employment after receiving the bachelor's degree or who intend to pursue graduate studies in a field other than physics. This option provides a more flexible program, which may be tailored to better suit the particular needs and goals of individual students.

The geophysics option of the physics major is designed for students interested in the Earth's dynamic changes. Attention is given to data analysis using programming and scripted languages of geophysicists as students prepare to enter the field or seek graduate degrees.

The General Science option is a rigorous field of study primarily designed for secondary education majors.

The Cooperative Education and Internship Program in Chemistry and Occupational Health Science

In conjunction with several industries and governmental laboratories, the University provides opportunities for a cooperative education (co-op) and internship program in chemistry and occupational health science. The program involves the option of alternating co-ops or pre-professional internships. Under the alternating co-op option, students work full-time one semester and attend classes full-time the following semester for a rotation of three semesters, equaling 52 weeks of work experience. Under the pre-professional internship option, students work a minimum of 150 contact hours during one regular semester or regular summer term. Eligible students must be in good standing (unrestricted admission status and without academic and non-academic holds) and have attained a minimum 2.5 cumulative GPA with the following classifications: sophomores or juniors for co-ops and seniors for internships. Students should consult the department chair for detailed information and applications.

Majors

- BA/BS Major in Chemistry (<https://catalog.una.edu/undergraduate/colleges-programs/arts-sciences/chemistry-and-physics/chemistry-ba-bs/>)
- BA/BS Major in Physics (<https://catalog.una.edu/undergraduate/colleges-programs/arts-sciences/chemistry-and-physics/physics-ba-bs/>)

Minors

- Chemistry Minor (<https://catalog.una.edu/undergraduate/colleges-programs/arts-sciences/chemistry-and-physics/chemistry-minor/>)
- Physics Minor (<https://catalog.una.edu/undergraduate/colleges-programs/arts-sciences/chemistry-and-physics/physics-minor/>)