

---

**Michael Hayes** University, and Oxford University (England). Students who complete the chemistry or biochemistry degree as described below or upon their coursework being approved by the chair of the department, will receive degrees that are certified by the American Chemical Society. Our certified programs offer students a broad-based and rigorous chemistry

**Sally A. Henrie** (1998). University Professor of Chemistry. B.S., University of Arizona; Ph.D., South Dakota State University.

**Randy F. Johnston** (1994). University Professor of Chemistry. B.S., University of Missouri, St. Louis; Ph.D., Texas Tech University.

**Michael R. Salazar** (2001). Professor of Chemistry. B.S., New Mexico State University; Ph.D., University of Utah; Additional study, Los Alamos National Laboratory.

**Laura Hailey** (2020). Academic Secretary–Biology and Chemistry, and Biology Program Coordinator. B.S., Union University.

**Donald Gordon** (2021). Stockroom Coordinator. B.S., Union University.

The chemistry program at Union University seeks to serve effectively all students, recognizing different needs, interests, and career goals. The faculty seeks to help students understand the physical world, the methods by which it may be studied, and its relationship to other aspects of the human experience. It is the intention of the faculty to create an environment in which students are challenged to acquire skills in problem solving utilizing the modern methods of science and to study in-depth the chemical processes which characterize life systems while developing an inquiring attitude toward scientific exploration. The curriculum is intended to provide liberal arts students with a working knowledge of science and to meet the needs of students who wish to:

- continue study in chemistry at the graduate level;
- teach science at the elementary or secondary school level;
- prepare to enter a health science profession such as medicine, dentistry, medical technology, pharmacy, nursing, physical therapy, or other allied health fields;
- or
- become a professional/industrial chemist.





**315. Organic Chemistry II (3) S**

Prerequisite: CHE 314; Corequisite: CHE 326.

**411. Clinical Chemistry (6)**

Chemical analysis of various body fluids and the study of their relationship to disease states.

**412. Instrumentation (1)**

The principles, use, and care of instruments found in up-to-date laboratories.

**421. Hematology and Coagulation (7)**

Application of theory to technical performance in hematological procedures which aid in classification of anemias, leukemias, and other blood cell abnormalities.

**422. Advanced Microbiology (7)**

A lecture and lab course covering the role of microorganisms as they cause disease in humans. Methods employed in the identification of bacteria, fungi, viruses, and rickettsiae.

**423. Serology (2)**

A lecture and lab course in immunology, including demonstrating reactions between antigens and antibodies. Use of these reactions as a serodiagnostic tool is presented.

**424. Immunohematology (5)**

Includes selection, testing and bleeding of donors, identification of blood group antigens and antibodies, procedures employed in providing compatible blood for patients, and principles and procedures used in blood component therapy.

**425. Parasitology (2)**

A study of parasites of medical significance, both indigenous and foreign, with particular emphasis on life cycles and identification.

**431. Urinalysis (2)**

Gross, physical, microscopic, and chemical analysis of urine.

**432. Clinical Correlations (1)**

Basic understanding of altered physiology in disease; correlation between laboratory test results and anatomical/physiological changes.

**440. Principles of Management and Ethics (0)**

Preparation for the medical graduate for positions of leadership as supervisors and instructors.

---

**179-279-379-479. External Domestic Study Programs (1-3) As Needed**

All courses and their applications must be defined and approved prior to registering.

**179PF-279PF-379PF-479PF. External Domestic Study Programs (Pass/Fail) As Needed**

All courses and their applications must be defined and approved prior to registering.

**182**

appr.5 (a)15of lup 5.1 (eudie1.w0)ed p21.h)-1.9 (o no)