Overview

A chemistry degree from Emory & Henry College prepares students for exciting and rewarding careers. Our graduates can be found in a wide range of fields including research, forensic science, pharmacy, teaching and medicine. With a proud tradition of excellence in the classroom and an emphasis on undergraduate research, the chemistry faculty provides students with a friendly, stimulating and rigorous learning environment.

Degree Program

The Chemistry Department offers Bachelor of Science (B.S.) and Bachelor of Arts (B.A.) degrees. Students who are interested in teaching can earn a B.A. or B.S. degree with teacher certification. The B.A. degree with an Applied Health Sciences track, designed as a three-year course of undergraduate study, is available for students planning to attend pharmacy school.

Special Opportunities

The Emory & Henry chemistry department is a vibrant place to study and learn. The department provides you with enrichment programs and opportunities that enhance your ability to compete for jobs and graduate school placement. The College’s chapter of the Student Affiliates of the American Chemical Society has been nationally recognized for participation in numerous activities. Members have presented their accomplishments at national ACS meetings. Other events include Science Fest, an undergraduate research symposium, and the Emory & Henry Science Book Club.

Undergraduate Research

Students who participate in undergraduate research projects gain technical and problem solving skills, communication skills, and experience interacting with the broader scientific community. Research participation also carries personal benefits including greater independence of thought, tolerance of obstacles and growing self-confidence. The faculty at Emory & Henry encourages all students to participate in undergraduate research, and strives to provide opportunities both on campus and at leading research institutions.

Our own research labs are full of activity, with students participating in projects that include adhesion forces in glassy interfaces and wound response in American chestnut trees. These student-faculty collaborations are fruitful as well as instructional, as students have made presentations at scientific meetings and have co-authored publications in major chemistry and materials science journals.

Emory & Henry students successfully compete on the national level for a wide range of research opportunities. Our majors recently carried out research projects at Harvard University, Brown University, The University of California at Berkeley, The University of Wisconsin, Wake Forest University, and internationally at the University of Cadiz in Spain.

In addition, a group of former chemistry graduates has established the Friends of the Sciences (FOTS). This group sponsors summer research opportunities for science students by providing stipends and site placements for student research at nationally known laboratories.
The Chemistry Department faculty is proud of Dr. Jim Duchamp, recipient of the 2009 Virginia Outstanding Faculty award.

Department Chair
Dr. Laura J. Hainsworth, lhainsw@ehc.edu
Associate Professor, Environmental, Analytical and Nuclear Chemistry. Ph.D., University of Maryland; Post Doctoral Research Fellow, Lawrence Livermore National Laboratory. Professional interests: Chemistry of natural and polluted water environments, rare radioactive isotopes in geochemical processes.

Dr. Sara Bier, sbier@ehc.edu
Instructor of Geology, Ph.D., Pennsylvania State University. Professional interests: Tectonics, structural geology, petrology, environmental geology, and science education; research in the south mountains of North Carolina, the Alaska Range and Talkeetna Mountains of Alaska.

Dr. Jim Duchamp, jcducham@ehc.edu
Professor, Physical Chemistry. Ph.D., Yale University; Post Doctoral Fellow, Cornell University. 2009 Virginia Outstanding Faculty Award. Professional interests: Nuclear magnetic resonance spectroscopy, Internet technologies in the classroom. Research: Measurement and calculation of chemical shifts.

Dr. Michael Lane, mlane@ehc.edu
Assistant Professor of Chemistry. Ph.D., Stanford University. Professional interests: The adhesion of thin film structures, the effects of chemistry on interfacial adhesion, the efficiency of molecular nanolayers for repair of damaged interfaces.

Dr. Ambrose Leong, aleong@ehc.edu
Hurst Professor of Chemistry, Organic Chemistry. Ph.D., Columbia University. Member, American Chemical Society, Phi Beta Kappa, Sigma Xi Scientific Research Society. Professional interests: Organic synthetic methods, molecular modeling, and industry consulting.

Facilities
State-of-the-art equipment available in the chemistry department includes Fourier Transform Infrared Spectrometer (FTIR), a Gas Chromatography-Mass Spectrometer (GC-MS), an Atomic Absorption Spectrophotometer (AA), an Ion Chromatograph (IC), a Nuclear Magnetic Resonance Spectrometer (NMR), an Ultraviolet-Visible Spectrometer (UV-VIS), a High Performance Liquid Chromatograph (HPLC) and an Atomic Force Microscope (AFM).

A computer lab for molecular modeling, an online literature search, and tutorials are among the department’s resources.

Alumni
The strength of Emory & Henry's Chemistry Department is confirmed by the success of its graduates. Below are examples of where a few of our alumni are now:

Justin Greer, '10, chemistry teacher, Marion High School, Marion, Va.
Seth Harden, '10, pharmacy school, ETSU College of Pharmacy, Johnson City, Tenn.
Beth Hudak, '10, Ph.D. program in physical chemistry, University of Kentucky, Lexington, Ky.
Nathan Payne, '10, chemist, Tennessee Eastman Corp, Kingsport, Tenn.
Robin Keown, '09, medical school, University of South Carolina, Columbia, S.C.
Tracy Bish, '08, M.S. program in forensic science, Cedar Crest College, Allentown, Penn.
Virginia Lamb, '08, Ph.D. program in biochemistry, University of Wisconsin, Madison, Wis.
Anthony Leonard, '07, M.D./Ph.D. program, Medical School of South Carolina, Charleston, S.C.
Jane Groseclose, '06, chemist, King Pharmaceuticals, Bristol, Tenn.

Many of these students benefited from NASA, NSF, DOE, FOTS fellowships or other summer internships while at Emory & Henry.