

# Chemistry

*A Chemistry degree is the ideal agent for a fascinating career in industry, government or education. Opportunities also are excellent for those who combine their undergraduate Chemistry degree with advanced studies in other fields.*

*At St. Ambrose, Chemistry majors graduate with the knowledge and adaptability to allow them to compete successfully in chemistry or medical graduate programs, to assume appropriate responsibilities as industrial chemists, or to teach competently at the secondary level.*

## Contact us

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Visit the Chemistry Department  
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For general information about  
St. Ambrose or how to apply:  
Admissions Office  
563/333-6300 or 800/383-2627  
email: [admit@sau.edu](mailto:admit@sau.edu)  
[www.sau.edu](http://www.sau.edu)

## Degrees offered and required credit hours

St. Ambrose offers a Bachelor of Science in Chemistry, Bachelor of Arts in Chemistry, Bachelor of Arts teaching major in Chemistry and Bachelor of Arts in Chemistry with a pre-med concentration. A teaching minor and non-teaching minor in Chemistry also are offered.

The Bachelor of Science degree program requires 44–45 credit hours of chemistry courses. Two courses in math and two courses in physics also are required. The Bachelor of Arts degree requires 32 credit hours in chemistry courses, plus two courses in math and two courses in physics. The Bachelor of Arts teaching major requires 47 credit hours in science and mathematics. Education courses also are required from the Education Department for licensure.

The Bachelor of Arts with a pre-med concentration requires 32 credit hours in chemistry courses, plus additional courses in biology. Students in this program are encouraged to tailor their studies to admission requirements of their desired medical school(s).

A Teaching minor requires 25 credit hours of chemistry, and a non-teaching minor requires 20 credit hours in chemistry with eight elective credit hours chosen from chemistry courses at the 200-level or above.

## Program highlights and courses

Chemistry students at St. Ambrose are broadly educated in chemistry, physics and mathematics while developing an excellent foundation in chemistry. Typical courses for the major and minor are: General Chemistry I and II, Organic Chemistry I and II, Quantitative Analysis, Instrumental Analysis, and Physical Chemistry. In addition, some degree programs include Advanced Inorganic Chemistry, Biochemistry, Environmental Chemistry, Internship or Chemical Research. Majors also take Physics I and II and two semesters of Calculus and Analytical Geometry.

See our course catalog at [www.sau.edu/catalog](http://www.sau.edu/catalog) for a full description of required and elective courses.

## Co-curricular activities and resources

Lewis Hall contains specially equipped science lecture halls and laboratories for hands-on training in modern chemical analysis. Major instruments available for faculty and student use include an Anasazi Fourier Transform Nuclear Magnetic Resonance Spectrometer (FTNMR), a high-resolution Fourier Transform Infrared Spectrometer (FTIR), a Diode Array UV-Vis Spectrophotometer, a Mass Spectrometer-Gas Chromatograph (GC-MS), and a High Performance Liquid Chromatograph (HPLC).

Students may join the St. Ambrose undergraduate chapter of the American Chemical Society, apply for work opportunities as laboratory assistants and volunteer during National Chemistry Week and in Kids and Chemistry outreach programs.

## Alumni

Chemistry graduates pursue careers as industrial chemists, research scientists or high school teachers. Others continue into graduate work in chemistry, environmental studies,

medical school, or pharmacy school. St. Ambrose chemistry graduates have a 100 percent placement rate in the chemical professions.

Fields in which our alumni are currently employed include:

- Medical research scientist for a research laboratory corporation. Graduated in 1997.
- Chemist for Sherwin Williams Paint Company. Graduated in 1997.
- Chemist for a metallurgical laboratory. Graduated in 1994.
- Medical School student. Graduated in 2002.
- Teacher at Bettendorf High School. Graduated in 2005.

## About the faculty

**Andrew Axup** PhD, Associate Professor

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Prof. Axup teaches general chemistry, physical chemistry, advanced inorganic chemistry, and the chemistry of art. He earned his PhD from the California Institute of Technology and has been at St. Ambrose since 1998.

**George Bailey III** PhD, Professor and Department Chair

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Prof. Bailey's interests are in both biochemistry and analytical chemistry. He received his doctorate from Wichita State University. Prof. Bailey joined the St. Ambrose faculty in 1991.

**Barry Ferm** PhD, Laboratory Coordinator and  
Chemical Hygiene Officer

FermBarretA@sau.edu

Prof. Ferm is a Quad Cities native and received his doctorate from the University of Iowa. He coordinates laboratory functions and preparations in the Biology and Chemistry Departments, as well as supervises student employees in these departments. Prof. Ferm monitors chemical handling and compliance for the University, and teaches a Laboratory Safety course. He joined St. Ambrose in 2006.

**Margaret Legg** PhD, Professor

LeggMargaretJ@sau.edu

Prof. Legg's areas of interest are developing chemistry programs for elementary schools and coordinating a summer workshop for elementary school teachers. She teaches general chemistry courses and physical chemistry. Prof. Legg received her doctorate in protein structure from Texas A&M University and came to St. Ambrose in 1980.

**Arthur Serianz** PhD, Professor

SerianzArthur@sau.edu

Prof. Serianz's area of expertise is organic chemistry. He earned his PhD from the University of Iowa and has taught general chemistry, organic chemistry and quantitative analysis at St. Ambrose since 1975.