

Learning Outcomes

Department of Chemistry

PROGRAM: CHEMISTRY, BS

Students who complete the B.S. program in Chemistry will be able to:

- 1) Apply key concepts and principles in
 - a) analytical chemistry
 - b) biochemistry
 - c) inorganic chemistry
 - d) organic chemistry
 - e) physical chemistry
- 2) Use standard instrumentation and laboratory equipment to conduct scientific experiments and perform chemical characterization and analyses.
- 3) Participate in the life of the Chemistry Department by involvement in one or more of the following areas: research, chemistry club, and/or various positions of responsibility serving as graders, tutors, stockroom workers and/or teaching assistants.
- 4) Be prepared for post graduate studies or a science related career.

PROGRAM: BIOLOGY-CHEMISTRY, BS

Students who complete the B.S. program in Biology-Chemistry will be able to:

- 1) Demonstrate an understanding of the process of science, and of the concepts and theories of biology across a broad range of organizational levels: molecular, cellular, and organismal.
- 2) Apply key concepts and principles in
 - a) quantitative analysis
 - b) biochemistry
 - c) bioinorganic chemistry
 - d) organic chemistry
 - e) physical chemistry (thermodynamics and kinetics)
- 3) Use standard instrumentation and laboratory equipment to conduct scientific experiments and perform chemical characterization and analyses.
- 4) Participate in the life of the Biology and/or Chemistry Department by involvement in one or more of the following areas: research, biology and/or chemistry club, and/or various positions of responsibility serving as graders, tutors, stockroom workers and/or teaching assistants.
- 5) Develop a rationally defensible integration of science and faith.
- 6) Be prepared for post graduate studies or a science-related career.

PROGRAM: ENVIRONMENTAL SCIENCE, BS

Students who complete the B.S. program in Environmental Science will be able to:

- 1) Demonstrate an understanding of the process of science and of the concepts and theories of biology across a broad range of organizational levels: molecular, cellular, and organismal, and ecological (population, community, ecosystem).
- 2) Apply key concepts and principles in analytical chemistry including quantitative and instrumental analysis.
- 3) Use standard instrumentation and laboratory equipment to conduct scientific experiments and perform chemical characterization and analyses.
- 4) Participate in the life of the Biology and/or Chemistry Department by involvement in one or more of the following areas: research, biology and/or chemistry club, and/or various positions of responsibility serving as graders, tutors, stockroom workers and/or teaching assistants.
- 5) Develop a rationally defensible integration of science and faith, particularly with regard to environmental stewardship.
- 6) Be prepared for post graduate studies or a science-related career.