

Bachelor of Science in Chemistry

The following Program Learning Outcomes have been established by Evangel faculty to define the areas of knowledge and skills that students graduating from this major degree program should have developed:

1. Demonstrate critical thinking and problem-based learning skills to understand, interpret, and evaluate scientific hypotheses.
2. Gain experience with working independently as well as part of a team.
3. Demonstrate proficiency using chemical principles in theory and practice (laboratory).
4. Communicate scientific findings in scientifically standard written and oral formats.
5. Develop a realistic understanding of the various challenges and benefits of chemistry vocations through work studies, internships, or summer research opportunities.
6. Demonstrate knowledge of chemical and instrumental analysis, organic and inorganic chemistry, atomic and molecular structure, thermodynamics, kinetics, quantum mechanics and spectroscopy.
7. Synthesize and characterize, by chemical or physical means, both organic and inorganic compounds.
8. Apply chemistry to environmental, industrial and health issues.
9. Perform experiments to obtain fundamental thermodynamic and kinetic data on chemical systems.
10. Operate scientific instruments that provide basic spectroscopic and electrochemical information and interpret data obtained.
11. Write and present formal laboratory reports on the results of chemical experiments. This includes computation, error analysis, and graphic data displays. This should include skills with computer based simulations and computational models.
12. Use modern instrumentation and classical techniques, to design experiments, and to properly record the results of their experiment.

13. Demonstrate proper procedures and regulations for safe handling and use of chemicals.