

Chemistry, Ph.D.

Learning Outcomes

Students will:

- independently learn new chemical principles and techniques beyond those typical of undergraduate academic training;
- identify original and worthwhile chemical problems stated as research questions and hypotheses;
- design and execute experiments as part of independent chemistry research investigations;
- critically evaluate their data, results, and conclusions and those of others in the chemistry community;
- identify potential problems in the responsible conduct of research and identify strategies for managing those problems;
- articulate standards for laboratory safety in chemical research, assess potential hazards they may encounter in novel chemistry research, and develop effective strategies to mitigate those risks; and
- communicate chemical knowledge, new models, and research results both orally and in writing for both technical and nontechnical audiences.