Science Methods provides an introduction to science teaching methods for graduate students seeking initial licensure or an additional endorsement in secondary biology, chemistry, geosciences, physics, or middle grades general science. Course content focuses on the design and teaching of standards-based lessons using the three dimensions of science (science and engineering practices, crosscutting concepts, and disciplinary core ideas) and the appropriate integration of technology into those lessons. Students in this course work within their content areas to evaluate, enhance, and plan appropriate science instruction. This course includes laboratory safety training and certification, which includes safe laboratory practices and procedures for science classrooms and the proper use of personal protective equipment. Students seeking initial licensure should complete NHC1: Introduction to Instructional Planning and Presentation before this course. There are no prerequisites for students seeking an endorsement in a new content area.

Competencies

- **Three-Dimensional Learning**
  The graduate analyzes connections among the three dimensions of science instruction—disciplinary core ideas, crosscutting concepts, and science and engineering practices—to prepare and plan for instruction.

- **Educational Technology**
  The graduate integrates technology into science activities to support student engagement and content mastery.

- **Assessment**
  The graduate develops assessment strategies that measure three-dimensional science learning to determine the effectiveness of teaching and learning experiences.

- **Lesson Planning**
  The graduate develops lessons that integrate the three dimensions of science with applicable technologies to connect scientific concepts and phenomena.

- **Safety and Ethics in the Science Learning Environment**
  The graduate develops plans for the use, storage, and maintenance of science materials and protective equipment and for the care of living organisms to comply with district, state, and federal safety, ethical, and legal standards for science teachers.

- **Emergency Response Plans**
  The graduate establishes an emergency response plan to prepare for potential emergency situations in the science learning environment.
Welcome to Science Methods! In this course, you will learn a variety of strategies that you can implement in teaching middle school and secondary science. In particular, make sure to focus on teaching and learning through the three dimensions of science. This course is delivered in the WGU learning platform, which incorporates e-textbook access, videos, and other interactive learning components. We encourage you to engage in the interactive activities (like knowledge checks) to remember and practice what you are learning. It is recommended that you complete the readings and activities in the order listed in the pacing guide. Your competency will be demonstrated by completing a performance assessment.