Science Education Concentration Description

Enhance your ability to teach the nature, content and practice of science with advanced knowledge and skills. Informed by theory and research, and guided by a Christian perspective, the science education concentration will equip you to teach K-12 and post-secondary students. You will learn effective ways to teach science that are authentic to the discipline and effective for all learners.

In addition to core courses, which provide detailed overviews of essential components of mastery teaching, including understanding and applying educational research and processes of curriculum development, the science education concentration features courses with the following emphases:

- Applications from cognitive science that promote student learning of scientific content and practices.
- Authentic ways to foster students’ understanding of the nature of science.
- Opportunities for students to develop increased competencies in scientific content.
- Christian perspectives on the intersection of science and the Christian faith.
- Practical instruction and assignments that allow students to develop lessons and activities directly transferable to their own classrooms.

Core courses

EDUC 500: Introduction to Graduate Studies in Education (1)
EDUC 510: Framing Questions, Global Forces, Constraining Structures (3)
EDUC 514: Introduction to Educational Research (3)
EDUC 516: Leading Educational Communities (3)
EDUC 522: Reshaping Curriculum, Teaching, and Learning (3)
EDUC 554: Pathways to Inclusion (3)
EDUC 596: Specialized Literature Survey (3)
- OR an approved elective
CIW: Current Issues Workshop (2)
EDUC 542: Diagnosis and Remediation of Literacy Difficulties (3)
- If needed: approved Michigan’s required reading course for certification renewal.

Concentration courses

SCES 525: Alternative Frameworks and Conceptual Change in the Science Classroom (3)
SCES 526: Teaching the Nature of Science (3)
SCES 527: Scientific Practices, Reasoning, and Cognition (3)
Approved Science Content Course (3 – 4)
Approved Science Content Course (3 – 4), or **EDUC 596**: Literature Survey Course (3)

**Total Credits: 30 - 33**