

## **EDSM 2010: Knowing and Learning in Science**

### **3 Credit Hours**

*Prerequisite: EDSM 1102*

Students construct a model of knowing and learning that will guide their future classroom practice. Issues of what it means to learn and know science, how what we know changes and develops, and the standards used to measure what science is known inform this model. Students will also explore the connections between kinds of assessments and theories of knowing. This course is restricted to participants in the UTeach program.

## **SCED 2421: Classroom Interactions**

### **3 Credit Hours**

*Prerequisite: EDSM 2010 and Admission to Teacher Education*

This course examines teachers, students, content, and interactions that lead students who are culturally, linguistically, or academically diverse to develop conceptual understandings of science. Science teacher candidates design and implement instructional activities informed by their understanding of science learning, then assess student learning of science. This course includes a 45 hour middle school science teaching experience as introduction to the adolescent learner, the equity imperative and science education reform.

## **SCED 3010: Perspectives in Teaching Science**

### **3 Credit Hours**

*Prerequisite: EDSM 2010 and Admission to Teacher Education*

Students apply and extend their understanding of knowing and learning in science by surveying the history of science and science education reform for application to teaching practice. Students deepen their ability to relate practices of modern science to their developing perspective on learning and teaching science as they analyze curricula and design reform-based science instruction. Lab component includes tutoring of secondary or tertiary science learners.