

STEM Teaching in K-12 Schools **space is limited to 8-10 participants**

Mondays – 8:30-10:30am, from February 23 – March 20

Each participant will have the opportunity to experience the K-12 classroom through a volunteer placement in a middle or high school setting. The placements will be tailored to each participant, and will range from one class period to a full day, depending on participant availability. The placement will ideally be scheduled during the last week of the module, but this will depend on participant and classroom availability. Placements will be finalized with participant approval.

Course Director:

Director of the Scientist in the Classroom Partnership Program, Department of Teaching and Learning

Course Description:

Teaching at the secondary level affords numerous career benefits for a graduate or postdoctoral scientist. K-12 school districts are continually in need of qualified professionals to teach courses in all science and math content areas, and teachers are eligible for tenure after five years of teaching and have numerous opportunities for upward mobility in the school system. In this module, participants will gain an understanding of the inner workings of the middle and high school classrooms, including the policies and structures governing school districts in Tennessee, teaching and course development strategies appropriate for the middle and high school setting, qualities of effective educators, and an understanding of careers in the K-12 sector. Students will gain actual classroom experience through a volunteer placement in a middle or high school classroom, and will have the opportunity to participate in a future certification program geared toward STEM professionals.

Session I: Understanding the Teaching Practice and Profession

Participants will gain an understanding of the secondary educational system and potential careers in the K-12 sector. Discussions will focus on the history of the educational system, the differences between the public and private school environments, and administrative structures within the school systems.

Session II: Understanding how students learn

Participants will gain an understanding of how learning changes throughout childhood, and what a student is able to understand at each level. Diversity of student populations will be investigated, as well as an understanding of how cultural values play a role in teaching and learning.

Session III: Translating content understanding to the classroom

Participants will play an active role in learning teaching and course development strategies for the middle and high school and learn how to become an effective educator.

Session IV: Developing an understanding of curriculum, instruction, management and assessment; Volunteering in K-12 schools

Participants will explore the concept of an effective classroom, covering classroom management and assessment techniques, and incorporating completed lessons into a module that can be presented to a class. Participants will be placed into a classroom to observe and/or participate in learning activities at the middle or high school level.