

Graduate Experience in Science Education

IND 412 - 3 credit hours
School of Medicine & Dentistry - Spring semester 2015
Tuesdays 9:00 – 12:00

This course provides an overview of some of the major theories, principals and concepts of science education. Learn about and model instructional skills and effective methods for communicating scientific knowledge to others.

Build a “toolbox” of skills in lesson-planning and teaching that:

- build on an understanding of students’ prior knowledge, their learning processes, and individual strengths and weaknesses
- stimulate and sustain students’ interest, engagement, and achievement
- use instructional strategies and assessment approaches to meet the needs of students of varying abilities

Course topics include:

- Learning styles and differentiated instruction
- Cooperative learning strategies
- Case-study teaching
- Lesson planning and course planning
- Assessment of student learning

Classroom observations of teaching will provide real-life examples of instructional methods used by science educators. As a final project, each student will design a lesson based on their own science research.

Here’s what former students had to say about this course:

- *If you asked me to design a lesson before this class, I’d have probably just come up with a lecture. That I now think in terms of activities and learning styles is a big plus.*
- *I feel that I could walk into a classroom and at least have a fair shot at being a successful teacher.*
- *I learned what goes into planning an affective lesson. I learned about different learning styles and how to tailor projects/lessons/questions towards each one.*
- *I felt this class improved my ability to communicate my ideas for all audiences. This course helped to raise my confidence that I could be a good instructor.*
- *It challenged me to think about how I learn, how I was taught, and how I’d like to teach others.*
- *It’s a great way to learn about not only teaching but the idea of learning and what the best approaches for you might be.*
- *I think this should be a required course. The course gives exposure to teaching that you otherwise will not get as grad students.*
- *It is an excellent opportunity to get your feet wet in education while still maintaining research. It was nice not to have to get a degree in education to gain an understanding.*
- *TAKE IT! It will change the way you think about learning and education.*
- *Anyone who wants to be an effective teacher should take this course. It makes you consider things you have never thought of that will make you a better teacher.*