TLPL101: Inquiry Teaching of STEM in Elementary School

Do you have a passion for math or science?

Are you looking for a 1-credit course to fill your class schedule?

Looking for a way to give back to your local community?

This course encourages students to think deeply about what it means to learn and teach math and science. The main goals are to begin to understand the teaching profession, the complexity of the classroom, and start to develop teaching practices that are responsive to student ideas.

You will be matched with a partner from your class, and a teacher in a local elementary school. Over the course of the semester, you and your partner will visit this teacher’s classroom to conduct two observations and teach two inquiry-based lessons. Your class schedule must allow for a 3-hour window of time, preferably twice weekly, during the local elementary school hours (7:45am-3:15pm) to complete the four fieldwork assignments. All schools are close to campus and accessible via public transportation. A background check and clearance is required prior to visiting the school.

WHAT COMES AFTER TLPL 101?

If you are interested in continuing to explore the teaching profession, consider taking TLPL102: Inquiry Teaching of STEM in Middle Schools. TLPL102 also offers a $150 scholarship to students who earn a “B” or better.

This course extends ideas from TLPL101. Course assignments and fieldwork experiences challenge students to engage deeply with a math or science topic in a cycle authentic to the teaching profession. Assignments include interviewing a student, teaching a lesson, analyzing student work, and conducting a follow-up discussion.

TERRAPIN TEACHERS

The Terrapin Teachers program offers undergraduates the opportunity to pursue a dual major in a math or science field, as well as secondary education. Upon completion, participants are eligible to receive teaching certification.

QUESTIONS?

Contact Dr. Anisha Campbell, Associate Director, Terrapin Teachers, 301-405-0094 or at amcamp10@umd.edu.
INTRODUCTORY COURSES

TLPL 101: Inquiry Teaching of STEM in Elementary School, 1 credit, offered fall and spring*

TLPL 102: Inquiry Teaching of STEM in Middle School, 2 credits, offered fall and spring*

*Described on prior page.

STEM EDUCATION COURSES

EDCI 488M: Knowing & Learning in Mathematics & Science, 3 credits, offered fall and spring; on-campus component meeting weekly for two hours, fifty minutes. Explores the implications of learning theories on individual learning and social (classroom) learning, and within the context of larger social justice issues.

EDCI 488P: Project Based Instruction, 3 credits, offered fall only; on-campus class component meeting twice weekly for eighty minutes and a field component in a high school requiring observations and a multi-day series of lessons. Focuses on problem- and project-based curricula and processes.

Classroom Interactions, 3 credits, offered fall only; on-campus component and a field component in a high school. Provides theoretical and practical frameworks for analyzing different instructional activities, focusing on content development through various classroom interactions. [in development]

EDHD 426: Cognition and Motivation in Reading, 3 credits, offered fall and spring; on-campus class component meeting weekly for two hours, forty-five minutes. Explores the cognitive and motivational aspects of reading and learning from text in subjects of science and mathematics.

Apprentice Teaching & Seminars, 15 credits; offered spring only senior year; field component of 40 hours per week; weekly on-campus seminar. [in development]

SPECIALIZED STEM CONTENT COURSES

Perspectives on Science, or MATH 274: Perspectives on Mathematics, 3 credits, offered spring only; promotes an understanding that science is a dynamic human endeavor that has been shaped by practical needs, social conflicts, and individual personalities. [in development]

MATH 470: Functions & Modeling, 3 credits, required for math majors, offered fall only; on-campus component meeting twice weekly for seventy-five minutes. Advanced perspective on some of the core mathematics content underlying high school mathematics courses. Incorporates problem-based learning using multiple technologies.

Research Methods, seminar offered spring only; participate in a STEM research experience (2 to 3 credits) for UMD departmental credit, and enroll in the TT Research Methods seminar (1 credit). [in development]

SAMPLE FOUR-YEAR PLANS CAN BE VIEWED ONLINE AT: go.umd.edu/TT4year