

UTEACHSA (UTE)

UTeachSA (UTE) Courses

UTE 1111. Introduction to STEM Teaching Step 1. (1-0) 1 Credit Hour.

Introduces STEM teaching as a career. Discussions include standards and inquiry-based lesson design and various teaching and behavior management strategies. This course requires fieldwork that allows the student to observe and teach in an elementary classroom. Generally offered: Fall, Spring.

UTE 1122. Introduction to STEM Teaching Step 2. (2-0) 2 Credit Hours.

Prerequisite: UTE 1111 with a grade of "C-" or better. Further exploration of STEM teaching as a career while building on the knowledge and skills developed in UTE 1111. Emphasis is placed on various teaching methods that are designed to meet instructional goals and learner outcomes. This course requires fieldwork that provides experience observing and teaching in a middle school STEM classroom. Generally offered: Fall, Spring.

UTE 2113. Functions and Modeling. (3-0) 3 Credit Hours.

Prerequisites: MAT 1093 or consent of instructor, and admission to the UTeachSA teacher preparation program. In-depth study of concepts needed to teach secondary school mathematics at various levels. Emphasizes the development of the concept of function, exploring function patterns in data sets, and the connections between the main topics of mathematics associated with a secondary school curriculum. Use of appropriate technology is explored. May not be applied toward the Mathematics Concentration of the B.S. degree in Mathematics. (Same as MAT 2113. Credit cannot be earned for both UTE 2113 and MAT 2113).

UTE 3023. Perspectives on Science and Mathematics. (3-0) 3 Credit Hours.

Prerequisite: MAT 1193, MAT 1214, STA 1053, or consent of instructor. An examination of important episodes in the history of mathematics and science that illustrate the nature of scientific inquiry and convey that scientific and mathematical concepts are not static. Topics may include Galileo's conflict with the Catholic Church, Isaac Newton's formulation of the laws of motion and invention of calculus, Charles Darwin's proposal of the theory of evolution by natural selection, the development of the atomic bomb, and the discovery of the double helix structure of DNA, or others chosen by the instructor. May not be applied toward the Mathematics Concentration of the B.S. degree in Mathematics. (Same as MAT 3023. Credit cannot be earned for both MAT 3023 and UTE 3023. Credit cannot be earned for both UTE 3023 and MAT 4123).

UTE 3043. UTeachSA Research Methods. (3-0) 3 Credit Hours.

Prerequisite: This course is only open to students who are participating in the UTeachSA teacher preparation program. Students design and carry out independent inquiries, which they write up and present in the manner that is common in the scientific community. Inquiries incorporate mathematics and the various science disciplines to solve research problems. (Credit cannot be earned for more both BIO 3043 and UTE 3043).

UTE 3203. Knowing and Learning in Mathematics and Science. (3-0) 3 Credit Hours.

Prerequisite: UTE 1111 with a grade of "C-" or better. May be taken concurrently with UTE 1111 or UTE 1122. Critical examination of issues related to what it means to know and learn in STEM classrooms. Emphasis on psychological foundations of learning, problem solving in STEM utilizing technology, principles of expert and novice understandings of subject matter, implications of high-stakes testing, and foundations of formative and summative assessment.

UTE 3213. Classroom Interactions. (3-0) 3 Credit Hours.

Prerequisites: UTE 1122 and UTE 3203 with grades of "C-" or better. Application of learning theories in STEM instructional settings. Design and implementation of instructional activities informed by students' own understanding of what it means to know and learn mathematics and science, and outcome evaluation on the basis of student artifacts. Opportunities to develop awareness and understanding of equity issues affecting students by examining gender, class, race, culture and other diverse attributes of students and how they impact learning. Includes field experience in a middle or high school classroom.

UTE 4203. Project-Based Instruction. (3-0) 3 Credit Hours.

Prerequisites: UTE 3213 with a grade of "C-" or better, cumulative GPA of 2.5 or higher, and admission to the Teacher Certification Program. Exploration of project-based learning environments and instructional strategies in STEM classrooms. Discussion of the foundations for designing, managing, organizing, and evaluating project-based curricula and processes in middle and high school classrooms. Includes field experience in a middle or high school classroom.

UTE 4646. Clinical Teaching. (0-0) 6 Credit Hours.

Prerequisite: Admission to Teacher Certification Program and the clinical teaching semester, and completion of UTE 1111, UTE 1122, UTE 3203, UTE 3213, UTE 4203, LTED 3773, and ESL 3063 with a grade of "C-" or better. Can lack no more than 6 hours in content subject matter. Individuals must apply to the director of clinical teaching one semester in advance. Full semester of full-day clinical teaching in grades 7–12. Student teacher will be responsible for planning, implementing, and evaluating instruction in collaboration with the cooperating teacher and in conjunction with the UTSA supervisor. Individuals pursuing a Basic Secondary Certificate, Concentration A, will student teach in the single teaching field for which certification is sought. Individuals with two teaching fields will student teach in their major teaching field. Seminars explore issues in teaching practice. (Same as C&I 4646. Credit cannot be earned for both UTE 4646 and C&I 4646).