

SCIENCE, TECH, ENGR, AND MATH (STEM)

Science, Technology, Engineering, and Mathematics Undergraduate Courses

STEM 1120 INTRODUCTION TO MATHEMATICAL AND COMPUTATIONAL THINKING (3 credits)

This course embraces the visual arts to introduce students to the foundational elements of mathematical and computational thinking. Visual patterns form the basis for explorations in arithmetic and geometric sequences, from which algebraic functions and corresponding functions in computer programs are reasoned.

Distribution: Math

STEM 2800 SCIENCE EXPERIMENTATION AND ENGINEERING DESIGN (4 credits)

Scientific Experimentation & Engineering Design (SEED) is a general education science course that introduces integrative STEM (Science, Technology, Engineering, and Mathematics) concepts and their applications. The course fosters 21st Century Learning through study and work in active, team-based experiential learning environments through all phases of near-space experiments using high-altitude balloon platforms. Near-space experiments require research question development, experiment hardware fabrication, experiment software integration, payload launch and recovery, data analysis, and formal experiments' results reporting. Science and Engineering Practices are central to students' experiences and work in this course, as the course models the interdisciplinary connectedness of academic fields, industry, and the community to encourage collaboration and discovery to effectively implement STEM concepts, practices, and innovation. (Cross-listed with TED 2800).

Distribution: Natural/Physical Sci General Education lecture&lab