Technology Engineering Education Courses (TECH TEE)

Courses

TECH TEE 1000. Technology and Engineering Education — 3 hrs.
Evolution, philosophy and contemporary approaches in technology and engineering education. Examination of career opportunities and curriculum design. This course will explore the historical and philosophical background, contemporary approaches, trends, and the role of technology and engineering education, as well as Career and Technical education in the total school curriculum. The course will specifically explore what it means to be a professional educator and will specifically look at the role of engineering design and innovation in a STEM curriculum as well as developing curriculum for Technology and Engineering and CTE Classrooms. (Fall)

Students will develop the requisite skills to build solutions to transportation challenges provided in class; as well as perform small engine repair and/or rebuild. (Spring)

TECH TEE 3050. Robotics and Sensors — 3 hrs.
Students will build their own autonomous robot. Students will learn and apply basic electronics, programming, physics concepts to develop their robot and create an interactive presentation on their creation. These robotics concepts will also be applied to important issues for industry and sustainability in the areas of automation, energy, and transportation. Lecture 1 period, Lab, 3 periods. Prerequisite(s): PHYSICS 1511 (880:054) and PHYSICS 1512 (880:056), or PHYSICS 1701 (880:130) and PHYSICS 1702 (880:131), or TECH 1037 (330:037) or CS 1510 (810:051). Other interested students with some experience in coding and/or electronics experience are encouraged to contact the instructor. (Same as PHYSICS 3050) (Variable)

Development of programs and courses for technology and engineering education and related fields including content decision-making, delivery strategies, and student/program evaluation. Prerequisite(s): TECH 1019 or TECH TEE 1000. (Spring)

TECH TEE 3150/5150. Technology & Engineering Education Lab Management — 3 hrs.
Design of safe and effective facilities for technology and engineering education and related fields, facility and classroom management, and development of a safety program. Prerequisite(s): TECH TEE 1000. (Spring)

TECH TEE 4100. Technology and Engineering Education Level 3 Teaching Experience — 1 hr.
Students in the Program are required to complete 3 levels of teaching experiences. This is the level 3 experience. Students are expected to complete a number of hours of observation as well as delivering some content in the classroom under the supervision of the cooperating teacher. Prerequisite(s): junior standing. Corequisite(s): TECH TEE 4200/5200. (Fall)

TECH TEE 4200/5200. Technology and Engineering Education Methods — 2 hrs.
Methods of teaching in technology and engineering education and related fields, including group and individualized strategies. This class must be completed with a minimum grade of C prior to student teaching. This course helps fulfill a core requirement for undergraduate students seeking a Bachelor of Arts Degree in the Technology Education Program and the Bachelor of Science in Technology and Engineering Education Program at UNI; as well as the methods requirement for the DOEE CTE Authorization. Prerequisite(s): TECH TEE 1000; TEACHING 2017; junior standing. (Fall)

Methods of teaching in career and technical education and related fields, including group and individualized instructional strategies. Prerequisite(s): junior standing. (Summer)