Technology Construction Management (TECH CM)

Courses

TECH CM 1000. Introduction to Construction Processes — 3 hrs.
Acquaint students with the many facets related to construction processes by identifying roles and responsibilities within the construction industry. Students will be exposed to construction with hands on projects. (Fall and Spring)

TECH CM 1050. Construction Safety — 3 hrs.
Examine the safety practices for the construction industry. Students will receive OSHA certified 30-Hour training during this course and understand the concepts of a Worksafe Program including regulations, safety audits, and costs impacting a company. Prerequisite(s): sophomore standing. (Fall)

TECH CM 1100. Construction Documents — 3 hrs.
Introduction to construction blueprint/plan and specification reading and how documents are created. Students will understand the relationship between plans and specs and how they impact the job. Exposure to old plan reading processes as well as new digital processes. Exposure to a physical 3D building as it relates to 2D prints so students can gain vision from concept to finished product. Prerequisite(s): TECH CM 1000. (Fall)

Basic principles of construction surveying equipment, techniques, building layout and calculations. Training with surveying equipment such as automatic levelers, laser levelers, GPS, and total stations. Lecture and lab format. Prerequisite(s): MATH 1140 (800:046) or MATH 1150 (800:048). (Fall)

Examination of construction contract principles, construction documents, and the component parts of law affecting construction operations. (Fall)

Basic principles, methods, and equipment pertaining to building mechanical systems (heating, cooling, ventilation, and plumbing) related to human health and comfort. Prerequisite(s) or corequisite(s): TECH CM 1100. (Spring)

TECH CM 3000/5000. Civil Construction — 3 hrs.
Examination of systems and operational procedures used to construct commercial, heavy and highway projects. Analysis/design of airports and highways. Earthmoving, dewatering, and construction economics. Prerequisite(s): TECH CM 1100; junior standing. Prerequisite(s) or corequisite(s): TECH CM 2000. (Fall)

Construction cost analysis techniques for estimating materials, labor, equipment, and subcontracting costs in commercial building construction. Prerequisite(s): TECH CM 1100. (Fall)

TECH CM 3100. Electrical Construction Materials and Methods — 3 hrs.
Basic principles of electricity and materials. Methods of electrical system designs in building construction. Prerequisite(s): TECH CM 1100. (Fall)

TECH CM 3150/5150. Construction Project Planning and Scheduling — 3 hrs.
Examine the construction process of a construction project as it relates to scheduling and planning. Students will gain exposure to planning and scheduling software while understanding the order of operations as it pertains to project workflow and following the critical path. Prerequisite(s): junior standing. (Spring)

Utilization of contemporary and emerging project management software. Further develop understanding of construction management and the softwares associated with estimating, project control, and construction document softwares. Prerequisite(s): TECH CM 3050; junior standing. (Spring)

TECH CM 4050/5050. Construction Management — 3 hrs.
Management concepts in construction: business methods, finance, decision making, labor relations, marketing, quality control, marketing and computer applications. Analysis of office and field problems. Prerequisite(s): TECH CM 3250; junior standing. (Fall)

TECH CM 4200/5200. Structural Components of Construction — 3 hrs.
Examine structural construction materials such as concrete, steel, and wood structural components. Understand the process and methods of how these structural components are erected and how applying loads impact the structure. Prerequisite(s): TECH 2080 (330:080); junior standing. (Fall)

TECH CM 4300/5300. Construction Technology and Innovation — 3 hrs.
Examine the most up to date construction technologies and methods as they relate to efficiency, sustainability, and productivity. Study industry current topics, news, and events. Discuss the future of the industry by having open discussions with innovators in the industry. Prerequisite(s): junior standing. (Spring)

TECH CM 4400. Construction Management Senior Project — 3 hrs.
Develop preconstruction services: estimating, project scheduling, project management matrix, quality control, and safety plan, etc. for presentation of request for proposal on a current project. Students will be exposed to project team work and typical pre construction processes and tasks in order to be awarded projects. Prerequisite(s): TECH CM 3150/5150; TECH CM 4050/5050; senior standing. (Spring)