

Engineering Management (EM)

Courses

EM 101 Introduction to Construction Project Management 3 Credits

This course provides a broad overview of the managerial, technological and physical processes that are involved in the creation of the built environment. It specifically focuses on understanding the issues in the management of a construction project. (Prerequisites: none. 3 credit-hours - 2 hours lecture and 3 hours lab).

EM 301 Project Management 3 Credits

The course covers the principles and practices of project management with particular emphasis on issues related to engineering and construction projects. Students will learn the principles of project management within the firm and in an environment characterized by inter firm relationships. 3 hours of class time per week.

EM 302 Supply Chain Management 3 Credits

The course covers the principles and practices of supply chain management with particular emphasis on issues related to engineering and construction projects. Students will learn the principles of supply chain management and purchasing in an environment characterized by inter firm relationships. 3 hours of class time per week.

EM 320 Construction Productivity 3 Credits

This course focuses on the planning and execution of the construction of vertical and horizontal construction projects. The course emphasizes the means and methods associated with heavy civil projects, earthwork, and the construction of the project's structural elements. Equipment selection and methods will be a major focus. Prerequisites: Junior standing. 3 credit-hours lecture.

EM 322 Construction Safety 3 Credits

Administration and application of the OSHA Act in the construction industry; includes standards, hazard identification and the development of a safety plan. Fulfills the requirements for the 30-hour OSHA safety training certifications. Classroom 3 hours. Prerequisite: junior or senior status.

EM 399 Special Construction Systems 3 Credits

EM 401 Pre-Construction Management 3 Credits

This course addresses the initial phases of the building creation process. It focuses on addressing the owner's design and construction needs and the delivery of value to the owner. Business development, estimating, planning and presentation skills are emphasized. A Design/ Build model is employed to encompass the full spectrum of architecture, engineering and construction (AEC) requirements. Classroom 3 hours. Prerequisites: EM 302.

EM 402 Construction Management Practices 3 Credits

A capstone and practicum course in construction management engineering that explores the processes of management as applied to actual construction projects. Topics will be reviewed in the seminar and students will work in teams to review how these topics were applied in an actual construction project and to design a construction management plan for a proposed project during laboratory. Two 1.5 hours seminar periods and a 3 hour laboratory per week. Prerequisite: EM 301 and EM 302.

EM 499 Topics: 3 Credits