Construction Science (CONS)

Courses

CONS 3533 Managing Construction Operations: 3 semester hours.
Managing construction operations from concepts of project selection, estimating, bidding, scheduling, subcontracting practices, cost tracking, project documentation, construction bonds, insurance, payments and the elements of close out. Special emphasis on the development of professional communication skills through student prepared multi-media presentations.

CONS 3633 Surveying and Soils: 3 semester hours.
Principles of surveying; use of surveying instruments, topographical surveys and traverses; field practice and computations. Basic considerations of site management and soils considerations for construction projects.

CONS 4403 Construction Internship: 3 semester hours.
Approved internship in the construction industry.

CONS 4406 Construction Internship: 6 semester hours.
Approved internship in the construction industry.

CONS 4413 Residential Construction: 3 semester hours.
Residential construction processes, scheduling, subcontracting, financing, estimating, project control and current trends in site selection, design and energy efficiency.

CONS 4423 Commercial Construction: 3 semester hours.
Focus on the project management of commercial construction projects ranging from high rise office buildings to small tilt-wall and pre-engineered buildings; topics include project acquisitions, mobilization, management, and close out.

CONS 4433 Industrial Construction: 3 semester hours.
Introduction to industrial construction with an emphasis on process and power plant construction from a field office management perspective.

CONS 4443 Highway/Heavy Construction: 3 semester hours.
Focus on the various aspects of highway/heavy construction; topics include earthmoving and paving equipment and utilization principles, pavement design and placement methods, unit price bidding methods, and a project case study.

CONS 4453 Facilities Management: 3 semester hours.
Focus on the various aspects of facilities management; includes budgeting for operations and management, energy management, change management, design-build changes, in house versus outsource maintenance, and contracting options.

CONS 4553 Construction Delivery Systems: 3 semester hours.
Methods and management techniques utilized in the building process.

CONS 4603 Construction Labor and Safety: 3 semester hours.
Constitutional and legal basis of labor relations in the construction industry; craft and trade unions; dual and merit shop operations; contractor-union agreements; safety on the job site; OSHA and related regulations.

CONS 4633 Construction Law and Ethics: 3 semester hours.
Delineation of contracts used in the construction industry; emphasis on understanding the functions and interrelationships of documents; review of law applied to the industry; application of the contract, and law to case studies; introduction to resources and analytical process used by construction professionals; ethics in the construction industry.

CONS 4753 Scheduling and Mobilization: 3 semester hours.
Project scheduling procedures to include computer applications and resource leveling; project types, office and field planning required to initiate the work; equipment and construction methods selection processes and an examination of contractual mandates specified.

CONS 4773 Construction Project Controls: 3 semester hours.
Introduction of students to construction related financial documents; includes schedule of values, labor and operations cost reports, and construction budgets, trace construction dollar flow from time sheet to balance sheet.

CONS 4993 Independent Study: 1-3 semester hour.
Individual reading, research and/or field work in selected topics.