

Construction Science and Management Courses for Graduate Credit

CNS 540. Construction Methods and Equipment. (3) I, II. Operations, costs, productivity of construction equipment. Investments/life cycle costing of the equipment. Equipment selection criteria and analysis. Construction methods. Three hours rec. a week. Pr.: CNS 321, 330, and 522.

CNS 610. Pre-Engineered Metal Building. (2). Pre-engineered metal building systems: history, components, erection procedures and sequencing, delivery considerations, quality control, safety, and quantity surveying and plan reading. Two hours rec. a week. Pr.: Professional Program standing in Construction Science and Management or Graduate student in Architectural Engineering

CNS 629. Tilt-up Concrete Structures in Construction Management. (2). Basics of concrete, principles of tilt-up concrete, construction operations of tilt-up projects, planning procedures for job site erection, and safety procedures. Two hours rec. a week. Pr.: CNS 320 and CNS 522.

CNS 634. Building Systems Installation and Commissioning. (3) I, on sufficient demand. Principles and methods for proper installation, commissioning and maintaining of efficient performance of mechanical, plumbing, fire protection, electrical, and lighting systems in building. Three hours rec. a week. Pr.: CNS 534, 535, and 536.

CNS 640. Construction Operations. (3) I, II. Shop drawing and submittal processes, field and office practices, change orders, construction safety standards and practice, pre-construction planning, expediting, short-interval planning. Two hours rec. and three hours lab a week. Pr.: CNS 641, CNS 642, and CNS 645.

CNS 641. Construction Estimating. (3) I, II. Understanding estimating procedures, quantity surveying, specification reviews, pricing of an estimate, market analysis, subcontractor and supplier solicitation, and risk management, following the CSI format. Nine hours lab a week. PR.: CNS 325 and 540.

CNS 642. Construction Management. (3) I, II. An introduction to the business of construction; study of legal considerations, contract documents, bonds and insurance. Evaluation of the characteristics of the construction firm, organization structure, and financial performance. Three hours rec. a week. Pr.: CNS 540.

CNS 645. Construction Scheduling and Cost Control. (3) I, II. Construction cost reporting and control. Construction planning, both long-term and short-interval, construction scheduling, monitoring, and controlling. Computer application. Two hours rec. and two hours lab a week. Pr.: CNS 540 and conc. enrollment in CNS 641.

CNS 650. Construction Safety. (2) II. Introduction to safety and safety programs, workers' compensation, OSHA organization and structure, safety policies and record keeping, safety standards. Emphasis will be on communication and job-site safety management. On-site safety inspections will be required within class presentation and written reports to be submitted. Two hours rec. a week. Pr. or conc.: CNS 535 and CNS 540.

CNS 738. Mechanical and Electrical Estimating. (2) II. Techniques of mechanical and electrical building systems estimating. Procedure for evaluating relative costs of different systems. Development of computer-aided finite and conceptual estimating techniques. Two three-hour labs per week. Pr.: ARE 534 or CNS 534, ARE 536 or CNS 536, and Pr. or conc.: ARE 533 or CNS 535.