CONSTRUCTION MANAGEMENT

- **CM**

1010 Construction Graphics and Nomenclature (3) 2 hrs. lecture; 2 hrs. lab. Graphic communication concepts and techniques relating to construction processes and nomenclature.

1030 Engineering Graphics (2) 4 hrs. lab. Not open to construction management majors. Conception, visualization, and communication of creative design concepts; introduction to engineering drafting and USA Standards Institute standards; freehand sketching; three-dimensional forms used in solution of engineering problems; use of automated graphical techniques in design and design communication.

1400 Microcomputer Applications in Construction (3) Utilization of construction software for estimating, planning and scheduling, financial analysis, and construction processes.

2012 Plan and Cost Analysis for Residential Construction (3) Prereq.: CM 1010 and MATH 1022. 2 hrs. lecture; 2 hrs. lab. Interpretation of working drawings and specifications; cost estimation; bidding; materials, methods, and equipment for residential construction.

2131 Materials, Methods, and Equipment II (Heavy and Industrial Construction) (3) Prereq.: CM 2131 and 3121. 2 hrs. lecture; 2 hrs. lab. Principles of estimating including quantity surveys, pricing analysis, and bid package preparation for industrial construction.

2141 Highway Construction (3) Prereq.: CM 3100. Basic fundamentals of highway construction including; earthmoving, drainage, road paving, bridge, and retaining walls; interpretation of plans and specifications; materials, methods, equipment, and estimating.

3000 Construction Safety (3) Construction safety relating to accident causation; contractual obligations; project management and coordination.

3002 Construction Planning and Scheduling (3) Prereq.: CM 1400 or approved computer elective, and CM 2121. Fundamentals of planning and scheduling techniques used in the construction industry to manage construction projects.

3100 Construction Surveying (3) Prereq.: CM 2121 and MATH 1022. 2 hrs. lecture; 2 hrs. lab. Principles of construction surveying, fundamental measuring procedures, error analysis, leveling, traverse measurements, horizontal curves, vertical curves, and earthwork calculations.


3131 Industrial Construction Estimating (3) Prereq.: CM 2131 and 3121. 2 hrs. lecture; 2 hrs. lab. Principles of estimating including quantity surveys, pricing analysis, and bid package preparation for industrial construction.

3141 Highway Construction (3) Prereq.: CM 3100. Basic fundamentals of highway construction including; earthmoving, drainage, road paving, bridge, and retaining walls; interpretation of plans and specifications; materials, methods, equipment, and estimating.

3200 Decision Making and Applied Ethics in Construction (3) Prereq.: CM 3121 and EXST 2201. Presentation of the mechanics of decision-making processes in construction including ethics and applied ethics.

3303 Mechanical and Electrical Systems (3) Prereq.: CM 2121 and PHYS 2002. Mechanical and electrical systems in residential and commercial buildings; nomenclature and design consideration; emphasis on management, quality control, and installation procedures.

3400 Construction Materials (3) Prereq.: CM 2121. Fundamentals involved in design, evaluation, testing, and construction of asphalt, concrete, aggregates, steel, timber, and composites; mechanic properties of soils, compaction, and slope stability; construction of shallow and deep foundations, and retaining walls.

3505 Structural Technology I (3) Prereq.: MATH 1441 and PHYS 2001. Rigid and deformable body structural mechanics for construction management majors focusing on determination of the nature, magnitudes, and equilibrium requirements of forces acting on structures and the internal load effects (stress and deformation) of these forces on the structural components.

3506 Structural Technology II (3) Prereq.: CM 3505. Structural design of ordinary timber, steel, and reinforced concrete buildings and bridges in accordance with appropriate design code specifications; emphasizes allowable stress design provisions to achieve safe and serviceable structural resistance to vertical and lateral load effects.

4200 Construction Administration (3) Prereq.: CM 3000, 3002, and 3121. Principles and theory of ownership, organization, contracts, insurance, bonding, and labor relations pertaining to the construction industry.

4201 Construction Law (3) Prereq.: CM 4200. Current legal problems, roles, and responsibilities associated with the construction industry; emphasis on claims avoidance.

4202 Construction Enterprise (3) Prereq.: CM 4200. Open to Construction Management majors only. A comprehensive study of construction management as it relates to a single construction enterprise.

4206 Special Topics in Construction Management (3) May be taken for a max. of 6 sem. hrs. when topics vary. Advanced topics, current issues, or recent developments in the construction industry.

4207 Independent Study (3) Prereq.: consent of a faculty member. May be taken for a max. of 6 sem. hrs. of credit when topics vary. Research on a construction topic as chosen by the student under direct supervision of a chosen faculty member.

4400 Advanced Computer Applications for Construction Management (3) Prereq.: CM 1400 or approved computer elective. Application of software programs currently being used in the construction industry.