CIVIL ENGINEERING

Department of Civil Engineering College of Engineering

271. Engineering Surveying
Fall, Spring. 4(3-3)

P: MTH 151

Application of surveying and error analysis to civil engineering problems. Earthwork, calculations, layout, and management of construction sites.

QP: MTH 112 QA: CEE 252, CEE 253

280. Introduction to Environmental Engineering
Fall, Spring. 3(3-0)

P: CEM 141 or CEM 151, MTH 132, CPS 130 or CPS 131

Elements of hydrology. Groundwater and surface water supply and contamination. Treatment systems for drinking water, wastewater, air, and solid and hazardous waste. Introduction to noise and radiation pollution.

QP: CEM 141, CEM 151, MTH 112, CPS 112 QA: CEE 280

305. Structural Analysis
Fall, Spring. 3(3-0)

P: MSM 211, CEE 390 or concurrently. R: Open only to Civil Engineering majors.

Determinate and indeterminate plane structures. Linearity, stability, determinacy. Virtual-work calculation of forces and displacements. Flexibility and stiffness methods in plane structures.

QP: MTH 211 QA: CEE 305, CEE 306

312. Soil Mechanics
Fall, Spring. 3(3-3)

P: MSM 215. R: Open only to Civil Engineering and Agricultural Engineering majors.


QP: MTH 211 QA: CEE 312

321. Introduction to Fluid Mechanics
Fall, Spring. 4(3-2)

P: MSM 306 or concurrently. R: Open only to Civil Engineering and Agricultural Engineering majors.

Not open to students with credit in MTE 352. Fluid properties, fluid statics, fluids in motion. Conservation of mass, energy and momentum. Dimensional analysis and similarity. Internal and external flows. Applications.

P: MTH 310, MTH 306 QA: CEE 321

337. Civil Engineering Materials I
Fall, Spring. 4(3-3)

P: MSM 211 or concurrently. R: Open only to Civil Engineering majors.

Common civil engineering construction and paving materials: aggregates, inorganic cements, asphalt, concrete, wood and steel. Composition, structure, physical and mechanical properties, tests, and production mix design.

QP: MTH 211 QA: CEE 337

346. Transportation
Fall, Spring. 3(3-0)

P: MTH 153. R: Open only to Civil Engineering, Engineering Arts, and Urban Planning students.

Planning, design, and evaluation of transportation systems. Transportation demand, capacity, delay, and service quality. Elements of geometric design.

QP: MTH 113 QA: CEE 346

370. Engineering Economics
Fall, Spring. 3(3-0)

P: MTH 153. R: Open only to College of Engineering students.


QP: MTH 113 QA: CEE 370

400. Structural Mechanics
Fall, Spring. 3(3-0)

P: CEE 305, CEE 390. R: Open only to Civil Engineering majors.


QP: CEE 306, CEE 390 QA: CEE 400, CEE 410

405. Design of Steel Structures
Fall, Spring. 3(3-0)

P: CEE 306. R: Open only to Civil Engineering majors.

Design of steel beams, columns, tension members and connections. Stability and plastic strength.

QP: CEE 306, CEE 390 QA: CEE 405

406. Design of Concrete Structures
Fall, Spring. Summer. 3(3-0)

P: CEE 305, CEE 337. R: Open only to Civil Engineering majors.

Design of reinforced concrete beams, slabs, columns and footings.

QP: CEE 306, CEE 398, CEE 390 QA: CEE 406

407. Structural System Design
Spring. 3(3-0)

P: CEE 405 or concurrently; CEE 408. R: Open only to Civil Engineering students.

Building or bridge design using steel, concrete, wood, or other materials. Approximate methods. Wind and earthquake forces.

QP: CEE 405, CEE 408 QA: CEE 407

418. Geotechnical Engineering
Fall, Spring. 4(3-0)

P: CEE 312, CEE 390. R: Open only to Civil Engineering majors.


QP: CEE 312, CEE 390 QA: CEE 418, CEE 419

421. Engineering Hydrology
Fall, Spring. 3(3-0)

P: STT 351, CEE 321 or concurrently. R: Open only to College of Engineering, College of Natural Science, and Crop and Soil Sciences majors.

Hydrologic cycle, streamflow, precipitation, evapotranspiration, infiltration, groundwater. Quantitative methods of analysis: probability, unit hydrograph, rating, and flow nets. Groundwater supply development, well flows.

QP: CEE 321, STT 351 QA: CEE 421