CIVIL ENGINEERING
LEVEL I & LEVEL II ELECTIVES BY AREAS OF SPECIALIZATION
18 total hours required, 5 Level I courses and 1 Level II.
3 out of 5 Level I courses must be from different areas.

**STRUCTURAL ENGINEERING**
- C E 331: Reinforced Concrete Design (C E 329, C E 331)
- C E 335: Elements of Steel Design (C E 329, C E 331)
- C E 363: Advanced Structural Analysis (C E 329, M 4271)
- ARE 362L: Structural Design in Wood

**INFRASTRUCTURE MATERIALS ENGINEERING**
- C E 351: Concrete Materials (C E 324P)
- C E 366K: Design of Bituminous Mixtures (C E 321)

**ENVIRONMENTAL ENGINEERING**
- C E 342: Water/Wastewater Treatment Engr (C E 341)
- C E 369L: Air Pollution Engineering (C E 341)
- C E 369R: Indoor Air Quality (C E 313K, ARE 346N)
- C E 364: Design of Wastewater & Water Treatment Facilities (C E 356, C E 342)

**GEOTECHNICAL ENGINEERING**
- C E 375: Earth Slopes & Retaining Structures (C E 357)
- C E 360K: Foundation Engineering (C E 357)

**TRANSPORTATION ENGINEERING**
- C E 367T: Traffic Engineering (C E 321)
- C E 367P: Pavement Design & Performance (C E 324P)
- C E 367G: Dsgn & Eval of Ground Based Trans Systems (C E 321)
- C E 367R: Optim Techniques in Transportation Engr (C E 321)

**CONSTRUCTION ENGINEERING AND PROJECT MANAGEMENT**
- ARE 335: Mtls & Methods of Bldg Construction (C E 324P)
- ARE 358: Cost Estimating in Bldg Construction (ARE 335)
- ARE 366: Contracts, Liabilities & Ethics (ARE 323K)

**WATER RESOURCES ENGINEERING**
- C E 358: Introductory Ocean Engineering (C E 319F)
- C E 374L: Groundwater Hydraulics (C E 356)
- C E 374K: Hydrology (C E 311S, C E 356)
- C E 365K: Hydraulic Engineering Design (C E 356)

**ARE 345K**: Masonry Engineering
- Offered in spring of EVEN years

**ARE 362M**: Adv Reinforced Concrete Design
- Offered in spring of EVEN years

**ARE 362N**: Advanced Steel Design
- Offered in spring of ODD years

**ARE 364N**: Advanced Reinforced Concrete Design

**ARE 365K**: Hydraulic Engineering Design
- Offered in spring of ODD years

**ARE 366L**: Optim Techniques in Transportation Engr

**KEY**
- COURSE #
- Course Title
- PREREQ
- COREQ

- F = FALL ONLY
- S = SPRING ONLY
- SU = SUMMER ONLY
- KEY = Special Timeline
- = Level II Course

NOTE: semester offered subject to change

Updated 8.22.17 SES