

CIVIL ENGINEERING UNDERGRADUATE AREAS OF CONCENTRATION

<p>ENVIRONMENTAL ENGINEERING</p> <p>Required Environmental Design Course – 1 required: CE 4355 Design of Water & Wastewater Treatment Facilities CE 4300 Air Pollution Control System Design</p> <p>Required Design Course Outside Environmental: CE 4328 Water System Design</p> <p>Other Civil Engineering Technical Electives: (course(s) taken to fulfill requirement in another category will not count)</p> <p>1 required from: CE 4350 Introduction to Air Pollution CE 4351 Physical Unit Processes CE 4354 Introduction to Hazardous Waste Management CE 4355 Design of Water & Wastewater Treatment Facilities CE 4300 Air Pollution Control System Design</p> <p>2 required from: CE 4311 Urban Transportation and Infrastructure Planning CE 4323 Landfill Design CE 4347 Reinforced Concrete Design CE 4350 Fundamentals of Air Pollution CE 4351 Physical Unit Processes CE 4354 Introduction to Hazardous Waste Management CE 4355 Design of Water & Wastewater Treatment Facilities CE 4358 Open Conduit System CE 4300 Air Pollution Control System Design</p>	<p>GEOTECHNICAL ENGINEERING</p> <p>Required Geotechnical Design Course – 1 required: CE 4321 Foundation Engineering CE 4322 Applications with Geosynthetics</p> <p>Required Design Course Outside Geotechnical: CE 4347 Reinforced Concrete Design</p> <p>Other Civil Engineering Technical Electives: (course(s) taken to fulfill requirement in another category will not count)</p> <p>3 required: CE 4320 Earth Structures Design CE 4321 Foundation Engineering CE 4322 Applications with Geosynthetics CE 4323 Landfill Design CE 4328 Water System Design CE 4336 Hot Mix Asphalt Design and Construction CE 4337 Portland Cement Concrete Pavements</p>	<p>STRUCTURAL ENGINEERING</p> <p>Required Structural Design Courses: CE 4347 Reinforced Concrete Design CE 4348 Structural Design in Steel</p> <p>Required Design Course Outside Structural: CE 4321 Foundation Engineering</p> <p>Other Civil Engineering Technical Electives: 2 required: CE 4324 Mechanics of Materials II CE 4325 Fundamentals of Finite Element Method CE 4360 Design of Structural Masonry CE 4361 Advanced Reinforced Concrete Design CE 4363 Fundamentals of Prestressed Concrete CE 4365 Structural Wood Design CE 4366 Fundamentals of Fiber Reinforced Composites CE 4368 Advanced Structural Analysis CE 4369 Loads on Structures CE 4300 Advanced Steel Design CE 4300 Cold Formed Steel Design CE 4300 Concrete Bridge Structures</p>
<p>TRANSPORTATION ENGINEERING</p> <p>Required Transportation Courses – 2 required: CE 4311 Urban Transportation Infrastructure Planning CE 4312 Street and Highway Design CE 4313 Traffic Engineering</p> <p>Required Courses Outside Transportation: CE 4347 Reinforced Concrete Design</p> <p>Other Civil Engineering Technical Electives: (course(s) taken to fulfill requirement in another category will not count)</p> <p>1 required from: CE 4311 Urban Transportation Infrastructure Planning CE 4312 Street and Highway Design CE 4313 Traffic Engineering CE 4320 Earth Structures Design CE 4328 Water System Design CE 4336 Hot Mix Asphalt Design and Construction CE 4337 Portland Cement Concrete Pavements</p> <p>1 additional CE Technical Elective required</p>	<p>WATER RESOURCES ENGINEERING</p> <p>Required Water Resources Courses – 2 of 3 required: CE 4328 Water System Design CE 4330 Hydraulic Design CE 4358 Open Conduit System</p> <p>Required Design Course Outside Water Resources – 1 required: CE 4355 Design of Water & Wastewater Treatment Facilities</p> <p>Other Civil Engineering Technical Electives – 2 required: (course(s) taken to fulfill requirement in another category will not count)</p> <p>CE 4328 Water System Design CE 4330 Hydraulic Design CE 4358 Open Conduit System CE 4312 Street and Highway Design CE 4321 Foundation Design CE 4322 Applications with Geosynthetics CE 4323 Landfill Design CE 4347 Reinforced Concrete Design</p>	<p>DESIGN COURSES FOR GENERAL CIVIL ENGINEERING</p> <p>Construction Design Courses: CE 4332 Construction Equipment, Methods and Management</p> <p>Environmental Design Courses: CE 4355 Design of Water & Wastewater Treatment Facilities</p> <p>Geotechnical Design Courses: CE 4321 Foundation Engineering CE 4322 Applications with Geosynthetics CE 4323 Landfill Design</p> <p>Structural Design Courses: CE 4347 Reinforced Concrete Design CE 4348 Structural Design in Steel</p> <p>Transportation Design Courses: CE 4312 Street and Highway Design CE 4313 Traffic Engineering</p> <p>Water Resources Design Courses: CE 4328 Water System Design</p>