

## TRANSPORTATION ENGINEERING

Transportation engineering is a broad-based program. Each program is specifically oriented toward an individual's interest, and should emphasize the research and development of transportation, or the design and application of transportation engineering. Each student's program of study must be developed before completing twelve graduate credit hours. Students pursuing a M.S., M.E. or Ph.D. degree must meet with their supervising committee to fully establish their program of study. Course requirements for the master's degree are listed below.

### **MASTER OF SCIENCE DEGREE (24 semester hours of course work plus thesis hours)**

**Core Courses:** Twelve semester hours of core course work are required; the core courses are listed below. Note that there are several options for the statistics course.

**Elective Courses:** A minimum of twelve semester hours of elective course work is required. At least six hours must be selected from the civil engineering transportation classes and other civil engineering electives, although no more than six hours may be selected from the other civil engineering electives. Up to six hours may be selected from supportive areas. Course selection must result in a cohesive program that supports the thesis and must receive the approval of the student's supervising committee.

**Thesis:** Once the student is enrolled in the thesis course(s), continuous enrollment is required. The student must be enrolled in six hours of thesis during the semester the student finishes the thesis requirements and files for graduation.

### **MASTER OF ENGINEERING DEGREE (36 semester hours of course work plus final exam hour)**

Twenty-four hours of course work must be in the major area of study.

**Core Courses:** Twelve semester hours of core course work are required; the core courses are listed below. Note that there are several options for the statistics course.

**Electives Courses:** A minimum of twenty-one semester hours of elective course work is required. At least twelve hours must be selected from the civil engineering transportation classes and other civil engineering electives, although no more than six hours may be selected from the other civil engineering electives. Up to nine hours may be selected from supportive areas. Course selection must result in a cohesive program that supports the major area and must receive the approval of the student's supervising committee.

**Project Course:** Each student must complete a three hour project on a transportation engineering topic (CE 5395 Master's Project) approved by the student's supervising committee.

**Final Exam:** Enrollment in CE 5193, Master's Comprehensive Examination is required in the semester of graduation.

**SUPPORTIVE AREAS:** Industrial Engineering, City and Regional Planning, Mathematics. Additional areas may be approved by petition to supervising committee.

**FINAL DEGREE REQUIREMENTS** vary depending upon a student's background and experience. Student's supervising committee establishes individual's final degree requirements.

#### **CORE COURSES**

CE 5330 Characteristics of Traffic  
 CE 5332 Highway Design  
 CE 5337 Urban Transportation Planning  
 IE 5318 Engineering Statistics II

#### **OTHER CIVIL ENGINEERING ELECTIVES\***

CE 5324 Transportation and Air Quality  
 CE 5346 Open Channel Flow  
 CE 5347 Advanced Hydrology  
 CE 5372 Geosynthetics  
 CE 6311 Advanced Foundation Design  
 CE 5336 Pavement Design  
 CE 5362 Rigid Pavements  
 CE 5361 Design and Construction of Asphalt Concrete

\*Additional courses may be approved by petition to supervising committee

<b>PLANNED SCHEDULE OF CLASS OFFERINGS</b> <i>(summer class offerings subject to change due to budget constraints)</i>	2010-2011			2011-2012			2012-2013			2013-2014			2014-2015		
	F	S	S	F	S	S	F	S	S	F	S	S	F	S	S
CE 5330 Characteristics of Traffic		C			D			C			D			C	
CE 5331 Traffic Engineering Operations (CE 4313)	C			D			C			D			C		
CE 5332 Highway Design (CE 4312)		C			D			C			D			C	
CE 5333 Traffic Control Systems		C						C						C	
CE 5335 Airport Engineering					D						D				
CE 5337 Urban Transportation Planning (CE 4311)	C			D			C			D			C		
CE 5338 System Evaluation					D						C				
CE 6306 Public Transit Planning and Operation					C						D				
CE 6308 Analytical Models in Transportation		C						D						C	
CE 6309 Traffic Flow Theory	C							D						C	
CE 5300 Introduction to Railroad Engineering (CE 4300)		C			C			D			C			D	

The Department may change the courses offered without notice. Summer Schedule, usually available by April 1, lists available summer courses. C – On Campus Only, **Course number in parenthesis ( )** indicates dual course offered composite with this course.