

# TRANSPORTATION

(Interdepartmental Graduate Major)

Work is offered for the degree master of science with a major in transportation under a cooperative arrangement with various departments including Civil, Construction and Environmental Engineering (CCEE), Community and Regional Planning (CRP), and Logistics, Operations and Management Information Systems (LOMIS). Opportunities are afforded for research in such areas as modeling and performance of transportation systems, highway safety and information systems, remote sensing, environmental analysis, techniques for urban and regional transportation system planning, environmental and social policy analysis of transportation systems, transportation policy analysis, analysis of transportation technologies, commodity distribution, public administration of the transportation planning process, regional development and transportation system interrelationships, transportation economics and finance, and planning for logistics management.

Students majoring in transportation will develop a program of study under the guidance of a program of study committee selected by the student in consultation with and approved by the chair of the faculty supervisory committee. For administrative purposes, the student's home department will be the department originally admitting the student. A major professor may be selected from any of the three participating departments. A student must designate at least one member of the POS committee from his or her home department, and at least one member from outside the home department.

A student must complete at least 34 credits of acceptable work including preparation of a 6 credit thesis or a 2-3 credit creative component. A structured minor requires 12 credits of approved transportation courses and a thesis or creative component on a transportation related topic.

A required core includes:

C E 551	Urban Transportation Planning Models	3
TRANS 691	Seminar in Transportation Planning	1
STAT 587	Statistical Methods for Research Workers	4
One course from all three cooperating departments (CRP, CCEE, and LOMIS)		

Detailed requirements are available from the chair of the supervisory committee.

Graduate students pursuing a major in any of the cooperating departments who have an interest in transportation are encouraged to consider a formal declared minor in transportation. Students considering a declared minor should consult with the chair of the supervisory committee about the requirements for it.

Students typically focus their program of study to support a career in one of five areas: transportation consulting, regional and statewide transportation planning, transportation service operations and management, transportation policy and economic analysis, and transportation planning and operation for local and state governments. Graduates will have specific knowledge in one or more of these focus areas and the skills to conduct research and analysis of transportation issues. These skills allow graduates to be productive immediately in positions related to a focus area or to continue in more advanced transportation graduate work.

**Courses primarily for graduate students, open to qualified undergraduates:**

**TRANS 555: Economic Analysis of Transportation Investments**  
(3-0) Cr. 3.

*Prereq: C E 350 or C E 355*

Application of economic analysis methodologies to evaluate transportation projects. Multi-modal approaches to evaluate impacts of transportation investments and maximize economic efficiency while considering equity and other social issues related to investment options.

**TRANS 599: Creative Component**

Cr. 1-3.

*Prereq: Pre-enrollment contract required*

Advanced topic for creative component report in lieu of thesis.

**Courses for graduate students:**

**TRANS 691: Seminar in Transportation Planning**

Cr. 1. Repeatable. S.

Provides an overview of current transportation issues; speakers provide seminars on a variety of timely transportation topics.

**TRANS 699: Research**

Cr. arr. Repeatable.