TRANSPORTATION PLANNING AND MANAGEMENT (THESIS OPTION), MASTER OF SCIENCE

General Information

Graduate study in Transportation Planning and Management at Texas Southern University focuses on developing an interdisciplinary program designed to train outstanding students for successful careers in the field of Transportation. Programmatic emphasis is on preparing the student to enter the public and private sector with considerable training and advanced knowledge concerning transportation planning and policy, highway traffic operations, transportation systems and technology, transportation logistics and management, maritime transportation management and security, and homeland security. Emphasis is on technical and economic as well as public policy aspects of transportation systems.

For those focusing on planning or operations careers, the TSU transportation program has a strong foundation in traffic operations, transportation planning, public transportation and Intelligent Transportation Systems (ITS). Students may structure degree programs to build on these strengths. For those pursuing management careers, TSU transportation programs have strong foundations in transportation principles, transportation systems and technologies, highway traffic operations, economics and finance, logistics, maritime transportation, homeland security, and transportation policy and management.

Through a rigorous graduate program of instruction, students will develop problem solving and analytical thinking skills by the study of transport system design, planning, and analysis. Students will also master appropriate research skills for use in both public and private transportation-related agencies and organizations. Graduate students and their faculty advisors will form research partnerships based upon their particular interests and the current needs of the transportation industry.

Majors in transportation are provided with unique opportunities to work with transportation experts through the Center for Transportation Training and Research (CTTR), the National Transportation Security Center of Excellence for Petrochemical (NTSCE-P), and the Innovative Transportation Research Institute (ITRI) at Texas Southern University. The CTTR, NTSCE-P and ITRI provide training programs with specialized internships and research opportunities through ongoing applied and empirical research and include demonstration activities.

Vision

We envision an education, research, training, and technology transfer program designed to develop a skilled and educated workforce that is highly competitive in a global market. The academic research and training program serves as an important resource of traffic and transportation engineers, planners, systems analyst, policy makers, business and industry leaders, logistics specialists, port managers, and security specialists for local, state, and federal governments, community organizations and agencies, and consulting companies in the nation.

Mission

In keeping with the traditional and urban mission of Texas Southern University, the Division of Transportation Studies in the College of Science, Engineering and Technology will provide education that builds on the latest data, systems and technologies in transportation. In preparing the next generation of transportation professionals, particular attention will be given to attracting and retaining individuals who represent diverse backgrounds socially, economically, and academically, and especially those who have not been well represented among transportation professionals in the past. There is a strong commitment to partnership development and a climate wherein various racial/ethnic and culturally diverse groups can develop their full potential.

Goals and Objectives

The primary goal of the academic program is to educate transportation planners, engineers, specialists, and managers who are able to plan, functionally design, and operate facilities and systems which satisfy the demand for both passenger and freight transportation services. To fulfill both the traditional and urban mission of Texas Southern University, the Transportation Studies Department has established strategic planning initiatives to fulfill both short and long term needs. The Transportation Studies Department shall

- Improve and expand transportation education, training and research.
- Advance technology transfer and expertise.
- Foster sound linkages between the department, other University units, and the public and the private transportation sectors.
- Participate in local, state and federal research and training initiatives.

The principal objectives of graduate study in transportation are:

1. to provide students with the professional knowledge and skills needed to compete successfully in a global economy;
2. to enhance students' abilities to develop creative solutions to complex problems in the context of socioeconomic and environmental considerations; and
3. to develop innovative ways to address transportation needs and problems.

The central focus of the academic program is to:

- identify and respond to the training needs of the transportation industry;
- provide an environment which enables students to develop maximum potential;
- encourage visionary and creative thinking;
- provide varied internships and research opportunities which acquaint students with human knowledge and actual work experiences;
- offer transportation education and training programs directed toward career development in cooperation with business, industry, labor, and public service agencies; and
- identify and meet professional and in service training needs through specialized short-courses, conferences, symposia, and/or seminars.

Requirements for Admission

Applicants must hold a bachelor's degree from an institution of acceptable standing and have a grade point average point of "B" or better in work completed during the last two years of undergraduate study. The applicant who will receive the bachelor's degree at the end of the

semester or term when applying for admission will be considered for a conditional admission. The bachelor's degree may be in:

- engineering,
- natural sciences,
- urban/city planning,
- business,
- public administration,
- political studies,
- geography,
- sociology,
- airway science/aviation,
- avionics,
- economics, or
- other transportation-related fields.

The applicant must meet the criteria for admission to the Graduate School. Applications cannot be evaluated until these requirements are met and the Graduate School receives the completed application. Application for admission forms may be obtained from:
The Graduate School
Texas Southern University
3100 Cleburne Avenue
Houston, Texas 77004
For information call the Graduate School at (713) 313-7233, or visit the department website and detailed information on the application steps can be found and downloaded at http://transportation.tsu.edu/.

Admission of International Students

Applications from international students are evaluated in the same manner as those of students from the United States. However, international students who have not received any degree or diploma in an institution whose official language is English must satisfactorily pass the Test of English as a Foreign Language (TOEFL) examination. This requirement is designed to determine whether or not students have a sufficient command of English to enable them to pursue their graduate studies effectively.

Degree Requirements

The Master of Science in Transportation Planning and Management degree program is structured to provide a common core of educational and training experiences as well as to provide the flexibility for interfacing with a variety of related disciplines. Efforts are made to equip students with the basic analytical, managerial, and planning competencies necessary either to work in the transportation industry immediately or to advance to doctoral study successfully.

Basic Requirements

1. Completion of a total of thirty-nine (39) semester credit hours of prescribed coursework.
2. A minimum 3.0 (A = 4.00) quality point average for all graduate work attempted.
3. Demonstration of acceptable grasp of the core courses by successful completion of the written comprehensive examination.
4. Completion of an internship/project report for all non-thesis option students.
5. Completion and successful defense of a thesis with the quality of scientific research for all thesis option students.
6. Demonstration of English proficiency by successfully completing the course English 501 Graduate Professional Writing, or by taking Graduate Record Examination (GRE) or Graduate Management Admission Test (GMAT) and getting score 3.5 or better on the analytical writing portion of the GRE or GMAT.
7. All other requirements of the Graduate School in Texas Southern University.

Computer Literacy

Students will be exposed to uses of computers and computer packages in transportation as part of the curricula. Emphasis is on personal and microcomputers. Students will use packages in highway capacity, traffic signal timing and coordination, traffic simulation and travel demand models in required course work. Students have access to TSU's personal computer laboratories with access to the Internet.

Thesis

Students electing the non-thesis option are not required to complete a thesis.

The culmination of the thesis program is the successful completion and defense of a thesis which is based upon independent research. The thesis must be prepared in a way that demonstrates rigorous, independent, empirical or applied research. This option will require that the final product of independent research is prepared in a way that demonstrates that the student has acquired a high level analytical ability. The research must exhibit substantive depth, logical organization, high level of creativity, and clarity of ideas. A faculty committee guides the student's work and evaluates the thesis. Students choosing the thesis track must enroll in the thesis course for a total of 6-9 hours, 3 of which can be substituted for by the internship class. The thesis course receives a grade of satisfactory or unsatisfactory only. Grades are assigned only after the defense of the thesis. A successful defense and submission of the thesis requires the supervising member of faculty to assign a satisfactory grade for the thesis course.

Internship

Students electing the thesis option are not required to complete an internship.

Students electing the non-thesis option are required to submit a final report on an investigation conducted while completing the internship or a project report assigned by the faculty advisor. Placements of internships will be sought with various public/private transportation agencies and firms. Students choosing this track must enroll in the 3-hour internship class.

Summary

Code	Title	Hours
Core Curriculum (p. 2)		15
Electives & Concentrations (p. 3)		15
Thesis/Internship (p. 3)		9
Total Hours		**39**

Core Curriculum Requirements (15 SCH)

Code	Title	Hours
Maritime Management and Security		
TMGT 810	Fund Of Trans	3

TMGT 811	Fund of Shipping	3
TMGT 815	Computer Apps In Trans	3
TMGT 823	Economics Of Trans	3
TMGT 826	Ship Operations & Mgmt	3
Other Concentrations		
TMGT 810	Fund Of Trans	3
TMGT 812	Prin Trans & Des Engrng	3
TMGT 815	Computer Apps In Trans	3
TMGT 823	Economics Of Trans	3
TMGT 830	Urban Trans Plng	3

SPECIALIZATION Electives/ Concentrations (15-18 SCH)

Code	Title	Hours
Select one of the following concentrations:		15-18
Planning and Policy		
TMGT 811	Fund of Shipping	
TMGT 820	Trans Mgmt & Policy	
TMGT 825	Marine Trans Sys	
TMGT 840	Quan Anal For Trans	
TMGT 842	Tran Project Implementation	
TMGT 845	Sys Anal In Trans	
TMGT 850	Travel Demand Analysis	
TMGT 855	Site Traffic Analysis	
TMGT 862	Hwy Traffic Operations	
TMGT 865	Traffic Signals & Signal Ctrl	
TMGT 870	Freight & Log Mgmt	
TMGT 880	ITS Tech & Applications	
TMGT 882	GIS for Transportation	
TMGT 885	Quan Asmt Tran Envir Impact	
TMGT 890	Transportaton Seminar	
TMGT 818	Trans Research Method	
Systems and Technology		
TMGT 811	Fund of Shipping	
TMGT 825	Marine Trans Sys	
TMGT 840	Quan Anal For Trans	
TMGT 842	Tran Project Implementation	
TMGT 845	Sys Anal In Trans	
TMGT 846	Tran Infrastructure Mgmt	
TMGT 850	Travel Demand Analysis	
TMGT 855	Site Traffic Analysis	
TMGT 862	Hwy Traffic Operations	
TMGT 865	Traffic Signals & Signal Ctrl	
TMGT 880	ITS Tech & Applications	
TMGT 882	GIS for Transportation	
TMGT 885	Quan Asmt Tran Envir Impact	
TMGT 890	Transportaton Seminar	
TMGT 818	Trans Research Method	
Logistics and Management		
TMGT 811	Fund of Shipping	
TMGT 820	Trans Mgmt & Policy	
TMGT 825	Marine Trans Sys	
TMGT 826	Ship Operations & Mgmt	
TMGT 842	Tran Project Implementation	
TMGT 845	Sys Anal In Trans	
TMGT 850	Travel Demand Analysis	
TMGT 860	Special Lecture Series	
TMGT 865	Traffic Signals & Signal Ctrl	
TMGT 870	Freight & Log Mgmt	
TMGT 875	Seminar on Ports and Waterways	
TMGT 880	ITS Tech & Applications	
TMGT 882	GIS for Transportation	
TMGT 885	Quan Asmt Tran Envir Impact	
TMGT 890	Transportaton Seminar	
TMGT 818	Trans Research Method	
Maritime Management and Security		
TMGT 820	Trans Mgmt & Policy	
TMGT 825	Marine Trans Sys	
TMGT 830	Urban Trans Plng	
TMGT 842	Tran Project Implementation	
TMGT 850	Travel Demand Analysis	
TMGT 866	Mktg of Maritime Trans Svcs	
TMGT 867	Marine Trans Sys Dsgn & Policy	
TMGT 868	Maritime Operations & Tech	
TMGT 869	Marine Ins & Cargo Loss Ctrl	
TMGT 870	Freight & Log Mgmt	
TMGT 875	Seminar on Ports and Waterways	
TMGT 871	Maritime Global Trading Sys	
TMGT 872	Maritime Ship & Port Security	
TMGT 880	ITS Tech & Applications	
TMGT 882	GIS for Transportation	
TMGT 885	Quan Asmt Tran Envir Impact	
TMGT 890	Transportaton Seminar	
TMGT 818	Trans Research Method	
Homeland Security		
TMGT 820	Trans Mgmt & Policy	
TMGT 825	Marine Trans Sys	
TMGT 870	Freight & Log Mgmt	
TMGT 880	ITS Tech & Applications	
TMGT 882	GIS for Transportation	
TMGT 890	Transportaton Seminar	
TMGT 818	Trans Research Method	
AJ 614	Issues in Terrorism and AJ	
Total Hours		**15-18**

Thesis (6-9 SCH)

Code	Title	Hours
TMGT 899	Thesis	

Course Requirements

Total Semester Credit Hours required: 39

- **Core Curriculum: 15 SCH**
- **Thesis Option**

- **Electives 15-18 SCH**
- **Thesis - 6-9 SCH**