

Transportation and Logistics

Department Information

- **Department Chair:**
Tim Peterson, Ph.D.
- **Academic Coordinator:**
Jody Bohn Baldock
- **Email:**
jody.bohn.baldock@ndsu.edu
- **Department Location:**
Upper Great Plains Transportation Institute, Quentin Burdick Building 418
- **Department Phone:**
(701) 231-7767
- **Department Web Site:**
www.ndsu.edu/business/programs/phd/
- **Application Deadline:**
See Admission Requirements
- **Credential Offered:**
Ph.D.
- **Test Requirement:**
GRE (GMAT may be substituted)
- **English Proficiency Requirements:**
TOEFL iBT 71, IELTS 6

Program Description

The Department of Transportation, Logistics, and Finance offers a Ph.D. degree in Transportation and Logistics (TL). The degree is awarded through the College of Business in collaboration with the Upper Great Plains Transportation Institute to provide high-quality graduate programs for students. The program's interdisciplinary approach attracts students with backgrounds in transportation and logistics, agribusiness, applied economics, civil engineering, construction management, emergency management, finance, geosciences, industrial/manufacturing engineering, and supply chain management.

Admission Requirements

The Transportation and Logistics Ph.D. program is open to qualified graduates of universities and colleges of recognized standing. To be admitted with full standing, the applicant must:

1. Hold a master's degree (preferred) from an educational institution of recognized learning, baccalaureate degree a minimum.
2. Have adequate preparation in one or more of the disciplines comprising transportation and logistics
3. Have shown the potential to undertake advanced study and research as evidenced by prior academic performance
4. Have earned a cumulative grade point average of at least 3.0 or equivalent in all courses completed at the highest education level reached
5. Submit a Graduate Record Examination (GRE) score at the time of the application. If a student has a recent GMAT score it may be substituted for the GRE.
6. Submit an NDSU Graduate School application consisting of the application, letter of intent, official transcripts, letters of reference, and English proficiency scores (if applicable). Additional documents that may be submitted could include resume and professional vita. Applications for admission will be submitted via the Graduate School website. Applicants must meet all application requirements of the graduate school and department before being considered for acceptance.
 - Domestic applicants requesting funding and all international applicants, the application deadline is April 1 for fall semester and September 1 for spring semester.
 - Domestic applicants not requesting funding, the application deadline is July 1 for fall semester and December 1 for spring semester.

Students who do not meet all requirements for admission or have deficiencies in prerequisite course work, but show satisfactory potential for graduate study, may be admitted conditionally. The conditional status may be changed to full graduate standing after the first or second semester of study, based on the student's academic performance.

Apply for Admission

To apply for admission, please visit the Admission Information page (<https://bulletin.ndsu.edu/graduate/admission-information>).

Financial Assistance

The number of assistantships vary from year to year, depending on grant availability and the number of students in residence. Applicants are considered on the basis of merit and potential to undertake advanced study and research.

To be considered for an assistantship, an applicant must complete a Graduate School application, be accepted by the department, and identify the desire for an assistantship or financial need in the statement of purpose.

Graduate tuition is waived for students with assistantships, but all fees are the student's responsibility.

Degree Requirements

The Ph.D. program requires the completion of a minimum of 90 credits of graduate study beyond the baccalaureate degree with an overall GPA of 3.0 or higher. If the student has a master's degree, the student is eligible to transfer 30 credits from the master's degree towards the 90 credits needed as long as the master's degree is related to the discipline in which a doctoral degree is being pursued. A minimum of 30 graduate course credit hours must be taken; among these credit hours, eighteen credits must consist of the core courses below, two credits must consist of the required graduate teaching experience, and a minimum of six credits must consist of Transportation and Logistics electives. An additional 30 credit hours must consist of research-based dissertation credits. Each student must develop a plan of study under the guidance of a faculty adviser and a supervisory committee.

Students must take a qualifying examination upon completion of the core courses. The qualifying exam will include two components: (1) core transportation and logistics knowledge and (2) competency in quantitative methods. After passage of the qualifying examination and successful completion of the courses designated in the plan of study, the student may schedule a comprehensive examination. The comprehensive exam includes written and oral components related to the student's area of concentration. The comprehensive exam also includes a dissertation prospectus examination in which the student must present and defend a plan for undertaking and completing a dissertation. After passage of the comprehensive exam and completion of the dissertation, the doctoral candidate must pass a final examination in which the completed dissertation is presented and defended. The Ph.D. program requires students to present at least one original transportation and/or logistics research paper at a national or international conference, and submit at least one paper to a referred transportation and/or logistics journal.

Code	Title	Credits
Core Courses (18 credits)		
TL 831	Modeling for Transportation and Logistics Decision Analysis	3
TL 881	Mixed Methods in Transportation Research	3
TL 882	Highway Planning and Logistics	3
TL 883	Introduction to Rail Transportation	3
TL 885	Spatial Analysis in Transportation & Logistics	3
TL 888	Research in Transportation and Logistics	3
Required Courses		
TL 892	Graduate Teaching Experience	2
Transportation and Logistics (TL) Elective Courses (≥ 6 credits)		
TL 811	Modeling for Logistics Research	4
TL 823	Contemporary Supply Chain Research	3
TL 829	Supply Chain Risk Management	3
TL 751	Transportation Cyber-Physical Security	3
TL 752	Transportation Planning and Environmental Compliance	3
TL 754	Urban Transportation Systems Analysis	3
TL 755	Context Sensitive Solutions	3
TL 756	Transportation and Land Use Integration	3
TL 757	Intelligent Transportation Solutions	
TL 786	Public Transportation	3
TL 787	Public Transportation II	3
TL 789	Leadership, Ethics, and Academic Conduct in Transportation	3
TL 715	Introduction to ERP	3
TL 719	Crisis Analysis and Homeland Security	3

TL 721	International Logistics Management	3
TL 725	ERP Configuration	3
TL 729	Adaptive Planning in Logistics Systems	3
TL 731	Logistics Decision Analysis	3
TL 733	Case Studies in Logistics	3
TL 735	Practical Data Analytics	3
Dissertation (≥ 30 credits)		
TL 899	Doctoral Dissertation	1-15

Faculty

Raj Bridgelall, Ph.D.

North Dakota State University, 2015

Research Interests: Big Data Analytics, Internet-of-Things (IoT), Cloud Computing; Connected and Autonomous Vehicles (CAV), Shared Mobility, Intelligent Transportation Solutions; Signal Processing and Mathematical Modeling of Transportation Systems; Remote Sensing with Unmanned Aircraft Systems; Hyperspectral Image Analysis; Radio Frequency Identification (RFID); Real-Time Locating Systems (RTLS); Energy Harvesting and Massive Scale Autonomous Wireless Sensor Networks

Department: Transportation, Logistics, and Finance

Ranjit Godavarthy, Ph.D.

Kansas State University, 2012

Research Interests: Public Transportation in Small Urban and Rural Areas, Demand Response Transit and Paratransit, Bike Share, Roundabouts, Traffic Engineering and Operations, Transportation and Highway Safety

Department: Transportation, Logistics, and Finance

Pan Lu, Ph.D.

North Dakota State University, 2011

Research Interests: Connected and Autonomous Vehicles, Smart Material and Structure Health Monitoring, Big Data Analytics for Transportation, Smart Transportation, Transportation System, Asset Management, Multimodal Transportation, Geospatial Transportation Modeling

Department: Transportation, Logistics, and Finance

Jeremy Mattson, Ph.D.

North Dakota State University, 2017

Research Interests: Public Transportation, Transportation Economics, Demand Modeling, Travel Behavior, Built Environment

Department: Transportation, Logistics, and Finance

Diomo Motuba, Ph.D.

North Dakota State University, 2009

Research Interests: Transportation and Land Use Planning, Freight Modeling, Transportation Economics, Connected Automated Vehicles, Logistics and Supply Chain Management, Transportation Safety

Department: Transportation, Logistics, and Finance

Tim O. Peterson, Ph.D.

Texas A&M University, 1988

Research Interests: Managerial Leadership, Application of Information Technology to Organizational Issues, Scholarship of Teaching

Department: Management and Marketing

Fred Riggins, Ph.D.

Carnegie Mellon University, 1994

Research Interests: Economics of Information Systems, Interorganization Systems, Adoption of New Technology, Radio Frequency Identification (RFID), Internet-of-Things (IoT), Blockchain, Cryptoeconomics, Information and Communication Technology in Microfinance

Department: Accounting and Information Systems

Joseph Szmerekovsky, Ph.D.

Case Western Reserve University, 2003

Research Interests: Project Management and Scheduling, Supply Chain Management and Technology, Energy Supply Chain Management, Healthcare Logistics

Department: Transportation, Logistics, and Finance

Denver Tolliver, Ph.D.

Virginia Polytechnic Institute and State University, 1989

Research Interests: Highway Systems Modeling, Multimodal Transportation Planning, Freight Transportation, Energy and Environmental Analysis

Department: Transportation, Logistics, and Finance

Kimberly Vachal, Ph.D.

George Mason University, 2005

Research Interests: Human Factors in Traffic Safety, Healthy Community Transport, Agricultural and Biofuels Transportation, Commercial Motor Vehicle Safety & Security, Containerized and Identity Preserved Grain Marketing, Regional Economic Development

Department: Transportation, Logistics, and Finance