

UNO - Master of Science in Transportation – Course Descriptions

TRNS 6061 - Introduction to Transportation Planning

This course provides an introduction to the practice of urban transportation planning. The course concentrates primarily on providing a general overview of the transportation planning process. Emphasis is placed on specific elements of that process and specific components of the urban transportation system.

TRNS 6010 - Transportation Seminar

Transportation Seminar is an overview of the professional practice and serves as a core course for the Master of Science in Transportation. The course introduces students to the various roles and responsibilities of transportation professionals as well as transportation policy and planning at various scales, across freight and passenger transportation systems. Students will be exposed to the complexities surrounding a multimodal and intermodal transportation system across the United States that connects us to the global transportation network. The course examines both public and private sectors' roles in the transportation system.

TRNS 6020 - Intermodal Freight Transportation

The purpose of this course is to explore the influence of the movement of freight on globalization in local, regional, and state economic development in the United States. Transportation and economic development in developing countries will also be considered. Part of the course will examine the phenomena of globalization and part will examine economic development strategies that communities can take to address the transportation challenges and opportunities created by globalization. Additionally, export promotion, attracting foreign direct investment (FDI), outsourcing, and immigration are covered.

TRNS 6200 – 495 Transportation Policy & Administration (C/L w URBN 6165)

In the context of the American political system, this course will explore the complex relationship between actors and systems that result in laws and policies that govern our everyday lives. Specifically, the national transportation policy and its evolution from a highway bill to a network of intermodal nodes that support the global supply chain and our resulting international relations will serve as the focusing policy from which students can then investigate other policy processes in any area of their choosing.

TRNS 6300 - Applied Techniques for Transportation Professionals

This course provides an overview of tools used by transportation professionals. This course provides students with a basic understanding of urban transportation planning and decision making. Topics include accessing, analyzing transportation data, supply and demand modeling, land use and travel behavior, transit system planning and policy, bicycle and pedestrian safety, transportation finance, the use of GIS in transportation, and project implementation and evaluation.

TRNS 6100 - Environment and Energy

Environment and Energy provides an overview of how energy, particularly transportation energy, impacts the environment. The course examines global, national, state and local energy demands, resources, impacts, technologies, and policies. The course explores efforts to decarbonize cities and regions, with an examination of the connections to climate policy and the role for transportation systems and the built environment in energy consumption and planning for future energy needs.

TRNS 6901 - Transportation Capstone I

Capstone I provides an opportunity for students to engage in applied research projects, including research design and presentation. The course examines global, national, state and/or local transportation demands, resources, impacts, technologies, and policies. The course explores efforts to mobilize people and goods, with an examination of the connections to climate policy and the role for transportation systems and the built environment.

TRNS 6902 - Transportation Capstone II

Pre-requisite TRNS 6901

TRNS 6800 - Transportation Internship -- OPTIONAL

This course is designed to provide students in the Master of Science in Transportation (MST) program practical experience working in a professional transportation environment. Through the internship students will practice and expand upon the skills they have developed in the program while gaining exposure to the wider transportation environment, politics that surround transportation decisions and the needs of the client organization. Students will work under the supervision of an internship supervisor at the host organization and a MST faculty advisor.