

NORTHWESTERN UNIVERSITY MASTERS OF SCIENCE PROGRAM IN TRANSPORTATION SYSTEMS ANALYSIS AND PLANNING

The MS in TRN requires 12 course units (7 core courses + 5 electives)

Track		1 st Quarter/Fall	2 nd Quarter/Winter	3 rd Quarter/Spring
Recommended: 4 Courses/Quarter plus Transportation Engineering Seminar		Introduction to Transportation Engineering (376, *)	Infrastructure Systems Analysis (483)	Transportation Systems Operations I: Urban Network (472-2, +, #) or Advances in Travel Demand Analysis and Forecast (472-2, +, #)
		Transportation Systems Planning and Management (479)	Transportation Systems Analysis I (471-1, *)	Evaluation and Decision Making for Infrastructure Systems (482)
		Transportation Economics and Public Policy (Econ 355)	Advanced Theories of Traffic Flow (472-1, +, #) or Transportation Systems Operations II: Scheduled Modes and Real Time Systems (472-1, +, #)	Transportation Systems Analysis II (471-2, *)
		4 th Course from Tracks below	4 th Course from Tracks below	4 th Course from Tracks below
	Seminar in Transportation Engineering (517) – no tuition zero credit seminar			
Tracks Choose 1 Course/Quarter	Transportation Science and Logistics	Mathematical Programming (450-1); <i>or</i> Transportation network design and operations (IEMS 489)	Production and logistics-I (480-1) <i>or</i> Supply chain modeling and analysis (IEMS 381)	Supply Chain Management (IEMS 480);
	Operations research	Uncertainty analysis (306) <i>or</i> Stochastic models and simulation (IEMS 315) <i>or</i> Mathematical Programming (450-1)	Mathematical Programming (450-2)	Civil and Environmental Engineering Systems Analysis (304)
	Travel demand analysis	Microeconomics (Econ 310) <i>or</i> Intermediate statistics (IEMS 401)	Travel Demand Analysis & Forecasting I (480-1)	Travel Demand Analysis & Forecasting I (480-2)
	Urban planning and policy	Elements of Public Finance (Econ 309)		Public Policy and Management Strategy: Energy and Environment (KGMS 466)
Writing requirement	Students are required to write a research or analysis paper on some aspect of transportation that demonstrates the student's knowledge, investigative and/or analytic ability, and writing skills.			
Note: required courses/projects are in bold face; all courses are Civ_Env courses unless otherwise stated				
# is offered in alternating years				
* must choose two of three course denoted by *, third * slot will be used for electives				
+ must choose one of four courses denoted by +; two are highly recommended				