

NORTHWESTERN UNIVERSITY MASTERS OF SCIENCE PROGRAM IN GEOTECHNICAL ENGINEERING

2024-2025

Note: The recommended program includes 12 courses, in addition to the SPREE Seminar series.
The minimum number of courses for an MS is 12 (9 required + 3 electives).

Track		1 st Quarter/Fall	2 nd Quarter/Winter	3 rd Quarter/Spring
Recommended: 4 Courses/Quarter plus Geotechnical Engineering Seminar		Soil Mechanics 1 (450-1)	Foundation Engineering (352)	Rock Mechanics (453)
		Finite Element Methods in Mechanics (327) OR Mechanics of Continua (417)	Constitutive Models for Soils (454)	Unsaturated Soil Mechanics (452)
		Individual Design/Research Project (499)	Individual Design/Research Project (590)	Individual Design/Research Project (590)
		4 th Course from Tracks below	4 th Course from Tracks below	4 th Course from Tracks below
		SPREE Center seminars in Fall (515-1), Winter (515-2) and Spring (515-3) quarters		
Tracks Choose 1 Course/Quarter	Structures	Matrix Analysis of Structures (423)	Properties of Concrete (321) Reinforced Concrete (325) Stability of Structures (424) Structural Analysis Dynamics (320)	Structural Steel Design (323) High Performance Architectural Design (386) Plates and Shells (410) Quasibrittle Fracture and Scaling (430)
	Others	Uncertainty Analysis (306) Environmental Transport Processes (440)	Advanced Finite Element Methods 1 (426-1) Infrastructure Systems Analysis (483)	Advanced Finite Element Methods 2 (426-2) Computational Chemodynamics (448) Theory of Elasticity (415)
Note: required courses/projects are in bold face				
¹ number in parenthesis are Civ-Env courses unless noted otherwise				