

**NORTHWESTERN UNIVERSITY MASTERS OF SCIENCE PROGRAM IN GEOTECHNICAL ENGINEERING**  
**2018-2019**

The M.S. in GEO program requires 12 courses (9 required + 3 electives) and the Geotechnical Engineering Seminars in winter and spring quarters.

Track	1 <sup>st</sup> Quarter/Fall	2 <sup>nd</sup> Quarter/Winter	3 <sup>rd</sup> Quarter/Spring
Recommended:  4 Courses/Quarter plus Geotechnical Engineering Seminar	<b>Ground Improvement (495-37)</b>	<b>Foundation Engineering (352)</b>	<b>Case Studies in Geotechnical Engineering (495-29)</b>
	<b>Hydrogeology and Subsurface Contamination (355)</b>	<b>Engineering Properties of Soil (451)</b>	<b>Unsaturated Soil Mechanics (452)</b>
	<b>Computational Plasticity and Limit Analysis (495-35)</b>	<b>Soil-Machine Interaction (495-39)</b>	<b>LRFD in geotechnical engineering (495-34)</b>
	4 <sup>th</sup> Course from Tracks below	4 <sup>th</sup> Course from Tracks below	MS Design project (495) see below
		<b>Seminar in Geotechnical Engineering in winter (515-1) and spring (515-2) quarters</b>	
Tracks Choose 1 Course/Quarter	Design	Uncertainty analysis (306)	STR/GEO Capstone Pre-design Seminar (504); zero units
	Earth Science	Introductory (Aqueous) Geochemistry (Earth 310)	Seismology and Earth Structure (Earth 323-0)
	Structures	Finite Elements (327)	Reinforced Concrete (325) Advanced Reinforced Concrete Design (495-27) Steel Design (323), <i>by permission only</i>
Note: required courses/projects are in <b>bold</b> face			
<sup>1</sup> number in parenthesis are Civ-Env courses unless noted otherwise			