

MS in Civil Engineering

Transportation Emphasis

Course No	Course Title	Area	Credit Hours	Semester Offered
505	Concrete Mixture Design and Analysis	Pavements	1.5	W
526	Bridge Preservation	Pavements	1.5	W – odd years
543	Chemical Stabilization of Soils	Pavements	1.5	W – odd years
562	Traffic Engineering	Operations and Planning	3	F
563	Pavement Design	Pavements	3	F
565	Urban Transportation Planning	Operations and Planning	3	F
566	Pavement Management	Pavements	3	W – even years
568	Asphalt Mixture Design and Analysis	Pavements	1.5	F – even years
580	Technical Writing for Publication		1.5	F – even years
662	Transport Simulation	Operations and Planning	3	W
664	Transportation Site Planning	Operations and Planning	3	W

Transportation Engineering is divided into two general areas with little professional overlap:

- **Highway Pavement Materials:** Students should supplement these courses with relevant coursework from Civil and Environmental Engineering or from Geology.
- **Transportation Planning and Operations:** Students should supplement these courses with relevant coursework from Civil and Environmental Engineering, Statistics, Mathematics, Geography, or Public Management.

For further information on the Transportation Engineering emphasis within the department contact:

Materials	Dr. Guthrie	422-3864	guthrie@byu.edu	430 N
Planning	Dr. Macfarlane	422-8505	gregmacfarlane@byu.edu	430 H
Operations	Dr. Schultz	422-6332	gschultz@byu.edu	430 O

Idealized Schedules

These schedules assume that students enter the program in Fall semester and have not already taken any of the listed courses.

Planning and Operations

Semester	Class 1	Class 2	Elective 1	Elective 2
Fall 1	562: Traffic	565: Planning	Stat 511	<i>Elective</i>
Winter 1	662: Simulation	664: Site Planning	<i>Elective</i>	<i>Elective</i>
Spring / Summer	Research			
Fall 2	699 R (Thesis)			

Work with your faculty advisor and thesis committee to identify electives that will aid your research and career goals. Electives and substitutions include (check course catalog for offerings):

- CEEEn 414: Engineering Applications of GIS
- CEEEn 461: Geometric Highway Design
- CEEEn 514: Geospatial Environmental Engineering
- Geog 410: Urban Planning Methods
- Geog 424: Urban Transportation Planning
- Geog 510: Professional Planning Studio
- Math 410: Introduction to Numerical Methods
- Math 525: Network Theory
- MPA 631: Public Program Evaluation
- MPA 632: Quantitative Decision Analysis
- MPA 634: Data Science for Managers
- MPA 675: Local Government 1: Form of Government and Service Delivery
- MPA 676: Local Government 2: Planning, Land Use, and Growth
- Stat 512: Statistical Methods for Research 2