

### MSCENE Recommended Background Courses For All Students

Equivalent SDSM&T Course	Title	Credits	Prerequisites
Math 123	Calculus I	4	Math 115
Math 125	Calculus II	4	Math 123
Math 225	Calculus III	4	Math 125
Math 321	Differential Equations	3	Math 125
Math 381	Probability and Statistics	3	Math 125
Physics 211	University Physics I (calculus-based)	3	Math 123
Chem 112/L	General Chemistry I/Lab	4	Math 102
Chem 114	General Chemistry II	4	Chem 112 and Math 102
EM 214	Statics	3	Math 125

### Background Courses by Emphasis Area

Equivalent SDSMT Course	Topic	EnvE/Water Resources	Geotech	Structures	Water Resources	Credits	Prerequisites
ME 221 or EM 216	Dynamics		X	X		3	Math 125, Phy 211, EM 214
EM 321	Mechanics of Materials		X	X		3	EM 214
EM 331	Fluid Mechanics	X	X		X	3	EM 214
CEE 316	Engineering and Construction Materials		X	X		3	EM 321, CEE 284
CEE 326	Environmental Engineering I	X				3	Chem 114 and junior standing
CEE 327	Environmental Engineering II	X				3	CEE 284 and one of the following: EM 328, EM 331, CBE 218, or ME 331
CEE 336	Hydraulic System Design	X			X	3	EM 331 and CEE 284
CEE 337	Engineering Hydrology	X			X	3	CEE 336 or EM 327 or EM 328
CEE 346	Geotechnical Engineering I		X	X		3	EM 321
CEE 347	Geotechnical Engineering II		X			3	CEE 346
CEE 353	Theory of Structures			X		3	EM 321 and CEE 284
CEE 456	Concrete Theory and Design			X		3	CEE 353