

**Department of Civil, Construction and Environmental Engineering**

**North Dakota State University**

**Pre-requisites for BSENVE Program**

<b>Course No.</b>	<b>Title</b>	<b>Credits</b>	<b>Pre-requisites</b>
<b>Core ENVE Courses</b>			
ENVE 111	Introduction to Environmental Engineering	1	None
ENVE 211	Design and Analysis for Environmental Engineers	1	None
ENVE 250	Fundamentals of Environmental Engineering	3	ENVE 211, MATH 165
ENVE 350	Microbiological Principles for Environmental Engineers	3	ENVE 250
ENVE 360	Environmental Chemistry for Water and Wastewater	3	Co-req. CHEM 240
ENVE 370	Sustainability Engineering	3	ENVE 250
ENVE 412	Unit Operations and Processes	2	ENVE 360, CE 309
ENVE 450	Environmental Engineering Chemistry Laboratory	1	ENVE 360, co-req. ENGL 321
ENVE 460	Environmental Fate and Transport	3	ENVE 360, CE 309
ENVE 473	Air Pollution	3	ENVE 460, ENVE 412
ENVE 488	Senior Design I	2	ENVE 412 and consent of instructor
ENVE 489	Senior Design II	2	ENVE 488
<b>Core CE Courses</b>			
CE 212	Graphical Communication	3	None
CE 309	Fluid Mechanics	3	ME 222
CE 310	Fluid Mechanics Laboratory	1	CE 309
CE 316	Soil Mechanics	3	ME 222, ME 223, co-req. MATH 266
CE 408	Water Resources and Supply	3	CE 309
CE 410	Water and Wastewater Engineering	3	ENVE 412
CE 477	Applied Hydrology	3	CE 408
CE 472	Solid and Hazardous Waste Management	3	ENVE 250
<b>Core Math Courses</b>			
MATH 128	Introduction to Linear Algebra	1	MATH 105 or 107
MATH 165	Calculus I	4	MATH 105 or 107
MATH 166	Calculus II	4	MATH 165
MATH 259	Multivariate Calculus	3	MATH 166
MATH 266	Introduction to Differential Equations	3	MATH 259

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<b>Core ME Courses</b>			
ME 221	Engineering Mechanics I	3	MATH 165
ME 222	Engineering Mechanics II	3	MATH 166, ME 221
ME 223	Mechanics of Materials	3	ME 221
<b>Core IME Courses</b>			
IME 440	Engineering Economy	2	Junior standing
IME 460	Evaluation of Engineering Data	3	Co-req. MATH 166
<b>Other Core Courses</b>			
CHEM 121	General Chemistry I	3	Co-req. MATH 103 or MATH 107 or math placement
CHEM 121L	General Chemistry I Laboratory	1	Co-req. MATH 103 or MATH 107 or Math placement
CHEM 122	General Chemistry II	3	CHEM 121
CHEM 122L	General Chemistry II Laboratory	1	CHEM 121L
ENGL 321	Writing in the Technical Professions	3	ENLG 102, Junior Standing
ENGR 327	Ethics, Engineering, and Technology	3	None
GEOL 105	Physical Geology	3	None
PHYS 252	University Physics II	4	ME 222, Co-req. MATH 166