

Name: _____

NORTH DAKOTA STATE UNIVERSITY
College of Engineering and Architecture

T = Transfer Credit
IP = Course is 'In Progress'

ID: _____

Construction Engineering

Fall 2012

2.50 Cumulative GPA Required

General Education Requirements - 40 Credits Required					Construction Engineering Major - 88 Credits Required				
Course	Number	Course Title	Credits	Grade	Course	Number	Course Title	Credits	Grade
First Year Experience (F)			1 Sem Credit		CM&E Courses - 35 Credits Required				
UNIV	189 ¹	Skills for Academic Success	1		CM&E	111	Introduction to CM&E	1	
Communication (C)			12 Sem Credits		CM&E	200	Construction Documents & Codes	3	
ENGL	110	College Composition I	3		CM&E	204	Construction Surveying	2	
ENGL	120	College Composition II	3		CM&E	212	Construction Graphic Communications	3	
COMM	110	Fund of Public Speaking	3		CM&E	240	Financial Cost Concepts	3	
ENGL	320 or 321	Business and Professional Writing or Writing in the Technical Professions	3		CM&E	301	Construction Equipment	4	
Quantitative Reasoning (R)			3 Sem Credits		CM&E	315	Specifications and Contracts	3	
MATH	165	Calculus I	4		CM&E	380	Construction Estimating	4	
Science & Technology (S)			10 Sem Credits		CM&E	385	Construction Safety	2	
CHEM	121/121L	General Chemistry I/Lab	3/1		CM&E	403	Scheduling & Project Control	4	
CHEM	122	General Chemistry II	3		CM&E	412	Construction Management Capstone	3	
GEOL	105 or 106	Physical Geology or The Earth Through Time	3		CE Courses - 26 Credits Required				
Humanities & Fine Arts (A)			6 Sem Credits		Refer to list of Civil Engr technical electives provided by the department for the 4XX courses listed below				
			3		CE	303/303L	Civil Engineering Materials/Lab	2/1	
			3		CE	309	Fluid Mechanics	3	
Social & Behavioral Sciences (B)			6 Sem Credits		CE	316	Soil Mechanics	3	
ECON	105	Elements of Economics	3		CE	343	Structural Analysis	4	
			3		CE	370	Introduction to Environmental Engr	3	
Wellness (W)			2 Sem Credits		CE	4XX	Construction Engineering Tech Elective	2	
			2		CE	4XX	Construction Engineering Tech Elective	2	
Cultural Diversity (D)					CE	4XX	Construction Engineering Tech Elective	3	
					CE	4XX	Construction Engineering Tech Elective	3	
Global Perspectives (G)					**ME Courses - 9 Credits Required				
ECON	105	Elements of Economics			ME	221	Engineering Mechanics I	3	
<p>¹Students transferring in 24 or more credits do not need to take UNIV 189.</p> <p align="center">All courses listed on this curriculum guide are required for the major.</p>					ME	222	Engineering Mechanics II	3	
					ME	223	Mechanics of Materials	3	
					**MATH Courses - 11 Credits Required				
					MATH	128	Introduction to Linear Algebra	1	
					MATH	166	Calculus II	4	
					MATH	259	Multivariate Calculus	3	
					MATH	266	Intro to Differential Equations	3	
					Additional Courses - 11 Credits Required				
					BUSN	431	Business Law I	3	
					ENGR	402	Engr Ethics/Social Responsibility	1	
					PHYS	252	University Physics II	4	
STAT	330	Introduction to Statistics	3						
Total Credits Required for Graduation:									133

Construction Engineering Technical Electives

Course	Credits	Prerequisite
CM&E 465 Bridge Engineering & Management	3	Senior standing
CE 404 Reinforced Concrete	3	CE 343
CE 405 Advanced Reinforced Concrete	2	CE 404
CE 408 Water Resources and Supply	3	CE 309
CE 411 Design of Pre-stressed Concrete	2	CE 404
CE 417 Slope Stability and Retaining Walls	2	CE 316
CE 419 Pavement Design	3	CE 303
CE 421 Open Channel Flow	3	CE 309
CE 430 Timber and Form Design	3	ME 223
CE 441 Finite Element Analysis	2	MATH 266
CE 442 Matrix Analysis of Structures	2	CE 343
CE 444 Structural Steel Design	3	CE 343
CE 445 Advanced Steel Design	2	CE 444
CE 446 Basic Dynamics of Structures	3	CE 343
CE 461 Foundation Engineering	2	CE 316
CE 462 Designing with Geosynthetics	2	CE 316
CE 472 Solid Waste Management	3	CE 370
CE 473 Air Pollution	3	CE 370
CE 477 Applied Hydrology	3	CE 408
CE 478 Water Quality Management	3	CE 370
CE 479 Advanced Water & Wastewater Treatment	3	CE 410