Civil Engineering
September Entry

Year	Term	Course	Title	Credit	Prerequisite	Co-requisite
Year 1	Fall	BCEE 231	Structured Programming and Applications for Building and Civil Engineers	3.00	MATH 204	ENGR 242
		CIVI 212	Civil Engineering Drawing and Introduction to Design	3.00		
		ENGR 201	Professional Practice and Responsibility	1.50		
		ENGR 213	Applied Ordinary Differential Equations	3.00	MATH 205	MATH 204
		ENGR 242	Statics	3.00	MATH 204; PHYS 204	ENGR 213
	Winter	ENGR 202	Sustainable Development and Environmental Stewardship	1.50		
		ENGR 233	Applied Advanced Calculus	3.00	MATH 204, 205	
		ENGR 243	Dynamics	3.00	ENGR 213, 242	
		ENGR 244	Mechanics of Materials	3.75	ENGR 213; ENGR 242 or 245	ENGR 233
		ENGR 251	Thermodynamics I	3.00	MATH 203	
	Summer	BCEE 371	Surveying	2.00	BLDG 212 or CIVI 212	
Year 2	Fall	BCEE 342	Structural Analysis I	3.00	ENGR 244	
		CIVI 231	Geology for Civil Engineers	3.00		
		ELEC 275	Principles of Electrical Engineering	3.50	PHYS 205	ENGR 213
		ENCS 282	Technical Writing and Communication	3.00	Students must pass the Engineering Writing Test (EWT), or pass ENCS 272 with a grade of C- or higher	
		ENGR 311	Transform Calculus and Partial Differential Equations	3.00	ENGR 213, 233	
		ENGR 361	Fluid Mechanics I	3.00	ENGR 213, 233, 251	
	Winter	BCEE 343	Structural Analysis II	3.00	BCEE 342	
		BCEE 344	Structural Design of Steel and Wood Elements	3.00	BCEE 342	
		CIVI 341	Civil Engineering Systems	3.00		BCEE 231
		CIVI 361	Introduction to Environmental Engineering	3.50	ENGR 361	
		ENGR 391	Numerical Methods in Engineering	3.00	ENGR 213, 233; COMP 248 or COEN 243 or MECH 215 or BCEE 231	

Year	Term	Course	Title	Credit	Prerequisite	Co-requisite
Year 3	Fall	BCEE 345	Structural Design of Reinforced Concrete Elements	3.00	BCEE 342	
		CIVI 372	Transportation Engineering	3.00	BCEE 371; CIVI 341	
		CIVI 381	Hydraulics	3.50	ENGR 361, 391	
		CIVI 390	Civil Engineering Design Project	3.50	ENCS 282	CIVI 361; BCEE 344; BCEE 345
		ENGR 371	Probability and Statistics in Engineering	3.00	ENGR 213, 233	
	Winter	BCEE 451	Construction Engineering	3.00	BLDG 341 or CIVI 341	
		CIVI 321	Engineering Materials	3.75	CHEM 205	
		ENGR 301	Engineering Management Principles and Economics	3.00		
			Technical elective*	3.00		
Year 4	Fall	CIVI 490	Capstone Civil Engineering Design Project	6.00	Minimum of 75 credits in BEng (Civil) including ENGR 301; CIVI 361, 390; BCEE 344, 345	
		BCEE 432	Soil Mechanics	3.50	ENGR 244	
			Technical elective*			
			Technical elective*			
	Winter	CIVI 490	Capstone Civil Engineering Design Project	Continued	Minimum of 75 credits in BEng (Civil) including ENGR 301; CIVI 361, 390; BCEE 344, 345	
		ENGR 392	Impact of Technology on Society	3.00	ENCS 282; ENGR 201, 202	
			Technical elective*			
			Technical elective*			
			General Education elective	3.00		

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Civil Engineering
January Entry

Year	Term	Course	Title	Credit	Prerequisite	Co-requisite
Year 1	Winter	ENGR 201	Professional Practice and Responsibility	1.50		
		ENGR 213	Applied Ordinary Differential Equations	3.00	MATH 205	MATH 204
		ENGR 233	Applied Advanced Calculus	3.00	MATH 204, 205	
		ENGR 242	Statics	3.00	MATH 204; PHYS 204	ENGR 213
		ENGR 251	Thermodynamics I	3.00	MATH 203	
	Summer	BCEE 342	Structural Analysis I	3.00	ENGR 244	
		ENCS 282	Technical Writing and Communication	3.00	Students must pass the Engineering Writing Test (EWT), or pass ENCS 272 with a grade of C- or higher	
		ENGR 202	Sustainable Development and Environmental Stewardship	1.50		
		ENGR 243	Dynamics	3.00	ENGR 213, 242	
		ENGR 244	Mechanics of Materials	3.75	ENGR 213 ; ENGR 242 or 245	ENGR 233
Year 2	Fall	BCEE 231	Structured Programming and Applications for Building and Civil Engineers	3.00	MATH 204	ENGR 242
		BCEE 344	Structural Design of Steel and Wood Elements	3.00	BCEE 342	
		CIVI 212	Civil Engineering Drawing and Introduction to Design	3.00		
		CIVI 231	Geology for Civil Engineers	3.00		
		ENGR 361	Fluid Mechanics I	3.00	ENGR 213, 233, 251	
	Winter	ENGR 392	Impact of Technology on Society	3.00	ENCS 282; ENGR 201, 202	
		BCEE 345	Structural Design of Reinforced Concrete Elements	3.00	BCEE 342	
		CIVI 341	Civil Engineering Systems	3.00		BCEE 231
		CIVI 361	Introduction to Environmental Engineering	3.50	ENGR 361	
		ELEC 275	Principles of Electrical Engineering	3.50	PHYS 205	ENGR 213
	Summer	BCEE 371	Surveying	2.00	BLDG 212 or CIVI 212	
		ENGR 311	Transform Calculus and Partial Differential Equations	3.00	ENGR 213, 233	

Year	Term	Course	Title	Credit	Prerequisite	Co-requisite
		ENGR 391	Numerical Methods in Engineering	3.00	ENGR 213, 233; COMP 248 or COEN 243 or MECH 215 or BCEE 231	
Year 3	Fall	BCEE 451	Construction Engineering	3.00	BLDG 341 or CIVI 341	
		CIVI 372	Transportation Engineering	3.00	BCEE 371; CIVI 341	
		CIVI 381	Hydraulics	3.50	ENGR 361, 391	
		CIVI 390	Civil Engineering Design Project	3.50	ENCS 282	CIVI 361; BCEE 344; BCEE 345
		BCEE 343	Structural Analysis II	3.00	BCEE 342	
	Winter	CIVI 321	Engineering Materials	3.75	CHEM 205	
		ENGR 301	Engineering Management Principles and Economics	3.00		
		ENGR 371	Probability and Statistics in Engineering	3.00	ENGR 213, 233	
			Technical elective*			
Year 4	Fall	CIVI 490	Capstone Civil Engineering Design Project	6.00	Minimum of 75 credits in BEng (Civil) including ENGR 301; CIVI 361, 390; BCEE 344, 345	
		BCEE 432	Soil Mechanics	3.50	ENGR 244	
			Technical elective*			
			Technical elective*			
	Winter	CIVI 490	Capstone Civil Engineering Design Project	Continued	Minimum of 75 credits in BEng (Civil) including ENGR 301; CIVI 361, 390; BCEE 344, 345	
			General Education elective	3.00		
			Technical elective*			
			Technical elective*			

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Civil Engineering
Co-op Entry

Year	Term	Course	Title	Credit	Prerequisite	Co-requisite
Year 1	Fall	BCEE 231	Structured Programming and Applications for Building and Civil Engineers	3.00	MATH 204	ENGR 242
		CIVI 212	Civil Engineering Drawing and Introduction to Design	3.00		
		CIVI 231	Geology for Civil Engineers	3.00		
		ENGR 213	Applied Ordinary Differential Equations	3.00	MATH 205	MATH 204
		ENGR 242	Statics	3.00	MATH 204; PHYS 204	ENGR 213
	Winter	ENGR 201	Professional Practice and Responsibility	1.50		
		ENGR 233	Applied Advanced Calculus	3.00	MATH 204, 205	
		ENGR 243	Dynamics	3.00	ENGR 213, 242	
		ENGR 244	Mechanics of Materials	3.75	ENGR 213 ; ENGR 242 or 245	ENGR 233
		ENGR 251	Thermodynamics I	3.00	MATH 203	
	Summer	BCEE 342	Structural Analysis I	3.00	ENGR 244	
		ELEC 275	Principles of Electrical Engineering	3.50	PHYS 205	
		ENGR 202	Sustainable Development and Environmental Stewardship	1.50		
		ENCS 282	Technical Writing and Communication	3.00	Students must pass the Engineering Writing Test (EWT), or pass ENCS 272 with a grade of C- or higher	
		ENGR 361	Fluid Mechanics I	3.00	ENGR 213, 233, 251	
Year 2	Fall	Work Term 1				
	Winter		General Educational Elective	3.00		
		BCEE 344	Structural Design of Steel and Wood Elements	3.00	BCEE 342	
		CIVI 321	Engineering Materials	3.75	CHEM 205	
		CIVI 341	Civil Engineering Systems	3.00		BCEE 231
		CIVI 361	Introduction to Environmental Engineering	3.50	ENGR 361	
	Summer	ENGR 311	Transform Calculus and Partial Differential Equations	3.00	ENGR 213, 233	
		ENGR 301	Engineering Management Principles and Economics	3.00		
		ENGR 391	Numerical Methods in Engineering	3.00	ENGR 213, 233; COMP 248 or COEN 243 or MECH 215 or BCEE 231	

Year	Term	Course	Title	Credit	Prerequisite	Co-requisite
		ENGR 392	Impact of Technology on Society	3.00	ENCS 282; ENGR 201, 202	
		BCEE 371	Surveying	2.00	BLDG 212 or CIVI 212	
Year 3	Fall	BCEE 345	Structural Design of Reinforced Concrete Elements	3.00	BCEE 342	
		CIVI 372	Transportation Engineering	3.00	BCEE 371; CIVI 341	
		BCEE 343	Structural Analysis II	3.00	BCEE 342	
		CIVI 390	Civil Engineering Design Project	3.50	ENCS 282	CIVI 361; BCEE 344; BCEE 345
		BCEE 432	Soil Mechanics	3.50	ENGR 244	
	Winter	Work Term 2				
	Summer	Work Term 3				
Year 4	Fall	BCEE 451	Construction Engineering	3.00	BLDG 341 or CIVI 341	
		CIVI 490	Capstone Civil Engineering Design Project	6.00	Minimum of 75 credits in BEng (Civil) including ENGR 301; CIVI 361, 390; BCEE 344, 345	
		CIVI 381	Hydraulics	3.50	ENGR 361, 391	
			Technical elective*			
			Technical elective*			
	Winter	CIVI 490	Capstone Civil Engineering Design Project	Continued	Minimum of 75 credits in BEng (Civil) including ENGR 301; CIVI 361, 390; BCEE 344, 345	
		ENGR 371	Probability and Statistics in Engineering	3.00	ENGR 213, 233	
			Technical elective*			
			Technical elective*			
			Technical elective*			

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