

Relationship of Elective Courses to BSCE Program Outcomes

<i>Program Outcomes</i> By the time of graduation from the BSCE degree programs, the students will have obtained:	<i>EAC/ABET Criterion 3</i>	Elective Courses																					
		CEE 3010 Geomatics	CEE 3340 Environ. Engng. Lab.	CEE 4210 Hydrology	CEE 4225 Coastal Engineering	CEE 4230 Environ. Transp. Model.	CEE 4310 Water Quality Engng.	CEE 4320 Hazardous Subst. Engng.	CEE 4330 Air Pollution Engng.	CEE 4395 Environ. Sys. Des. Proj.	CEE 4410 Geosystems Engng. Des.	CEE 4420 Subsurface Characteriz.	CEE 4430 Environ. Geotechnics	CEE 4510 Structural Steel Design	CEE 4520 Reinforced Concr. Des.	CEE 4530 Timber & Mas. Design	CEE 4540 Infrastructure Rehab.	CEE4550 Structural Analysis II	CEE4610 Multimodal Transp. Plan	CEE4620 Environ. Impact Assess.	CEE 4630 Site & Roadway Design	CEE 4795 Groundwater Hydrology	
1. A broad education and knowledge of contemporary issues necessary to understand the impact of civil engineering solutions in a global, societal, and environmental context.	h j	L	L	H	M	M	H	H	H	H	H		H	M	M	L	M			H	H	H	H
2. An ability to solve civil engineering problems in practice by applying fundamental knowledge of mathematics, statistics, science, and engineering principles, and by using modern engineering techniques, skills, and tools.	a k	M	H	M	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
3. An ability to identify, formulate, and solve civil engineering problems, particularly the planning design, construction, and operation of engineered and natural systems, components, or processes that meet specified performance, cost, time, safety and quality needs, and objectives.	c e	M	M	M	M	M	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
4. An ability to design and conduct experiments and to analyze and interpret data in two or more of the following areas: geotechnical engineering, hydraulic engineering, and materials of construction.	b j k	H	M							L	H	H											
5. An ability to convey technical material through oral presentations.	g		H	M						H		H						M	M		L	H	
6. An ability to convey technical material through written papers/reports.	g		H	M				H		H		H		H				M	H	M	M	H	
7. An ability to function within multidisciplinary teams.	d		H					H		H		H		M					M		L		
8. An understanding of professional, societal, and ethical practice and responsibilities.	f		L	M	L	L	L	L	L	H	M	L	L	H	L	M	M	M	L	L	L	L	L

H = High Level, M = Medium Level, L = Low Level

Relationship of Elective Courses to BSCE Program Outcomes (continued)

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9. A recognition of the importance of professional licensure and a recognition of the need for, and an ability to engage in, life-long learning.	i		L	M	L	L	L	L	L	H	L	L	L	M	M	L	L	M	L	L	L	L	
10. An ability to perform civil engineering design by means of integrated design experiences.			L		L			M	M	M	H	M		H	M		M	M	L			M	
11. An ability to apply knowledge to address engineering solutions in a minimum of four of the following areas: construction engineering, environmental engineering, geotechnical engineering, hydraulic engineering, structural engineering, and transportation engineering.			M		H	H		M	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
12. An ability to explain basic concepts in management, business, public policy, and leadership.										L							L		M	H			

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