Table 3.D.1 Core curriculum linkages to program outcomes

Semester	Outcomes / Course	*a*	*b*	*c*	*d*	*e*	*f*	*g*	*h*	*i*	*j*	*k*
Freshmen Fall	Eng 100							3	2			2
	Math 241	3										2
	Chem 161 & 161L	3	2									1
	FG Global and Multicultural Perspectives								3			
Freshmen Spring	Math 242	3										2
	Phys 170 & 170L	3	3									2
	Chem 162	3										1
	EE 160 or ICS 111	3		1					1			3
Sophomore Fall	CEE 270	3				3	1		1	1	1	3
	Math 243	3										2
	Phys 272 & 272L	3	3	1								2
	FG Global and Multicultural Perspectives								3			
	DH Hum. Div. Req. or DL Lit. Div. Req.								3			
Sophomore Spring	CEE 271	3				2	1					
	Math 244	3										2
	CEE 370 & 370L	2	3	1	1	3	1	3		1	1	1
	Biological science elective	3							3			
	Sp 251							3	2			
Junior Fall	CEE 305	3	1	1		2	1		1		1	1
	CEE 320	3	3		2	2	1	3		1	1	
	CEE 361	1					1	1	2	1	3	1
	DS Social Sci. Div. Req. Econ. Elect.								3			
	Math Elect - ME403,GG312,Math302/307	3										2
Junior Spring	CEE 330	3	2	1	1	2	1	1	2		2	3
	CEE 355	3	3		3	2		2	1	1	1	2
	CEE 375	1	3	2	1	1	1	2	1	2	2	2
	CEE 381	3				2				1		2
	DS Social Science Div. Req.								3			
Senior Fall	CEE 461,	3	1	2	1	3	1		1	1		2
	CEE 462 or	1	1		2		1	3		3	1	1
	CEE 464	2	1		3	1	1	2	3	3	1	2
	CEE 472,	1			1	1	1		1	1	1	
	CEE 473 or	1		1		1	1	1	1	1	1	1
	CEE 474	1		2		2	2	2	2	2	2	2
	Technical Elective[2]	See below										
	Technical Elective[2]	See below										
	CEE 489B	1			1	1	1			1		2
	CEE 489C						3		1	1	1	
Senior Spring	CEE 421 or	3	2	3	1	3	2	1	2	2	1	3
	CEE 431	3		2		3			2	2	2	3
	CEE 455	3	1	2		3	1		1	1		3
	CEE 490	3		3	3	3		3	3	2	3	3
	Technical Elective[2]	See below										
	Technical Elective[2]	See below										
PROGRAM OUTCOME SUM TOTAL[3]		70	25	14	13	30	15	21	39	17	18	48

Notes:

1. "blank" = no emphasis; 1 = some emphasis; 2 = moderate emphasis; 3 = significant emphasis
2. A list of technical electives and their curriculum linkages to program outcomes are provided below.
3. When calculating the program outcome sum total, the columns are summed using the lowest possible weighting scale if students have a choice among courses (e.g., for outcome *a*, CEE 462 has the lowest weighting scale among the CEE 46X courses. It is used to compute the sum.)

Technical Electives

Outcomes / Course	***a***	***b***	***c***	***d***	***e***	***f***	***g***	***h***	***i***	***j***	***k***
CEE 424	3	3	2	2	3	2	2	2	2	2	3
CEE 432	3	2	1	1	3	1	2		1	1	3
CEE 471	1				1	1		1	1	1	
CEE 476	1		2		1	1		2	2	2	2
CEE 482	3				2				1		2
CEE 485	3	3	2	2	3	1	2	1	2	2	2
CEE 486	3		3		3	1	1	1	2	2	2
CEE 491[a]	1		3	3	2	1	3	3	2	2	2
CEE 491[b]				2			3	2		1	3

a. Sustainable Construction
b. Policy and Infrastructure

Table 3.F.1 Mapping of program educational objectives, outcomes and assessment methods from 2003-2004 to 2005-2006

PROGRAM EDUCATIONAL OBJECTIVES	PROGRAM OUTCOMES (ABBREVIATED FORM OF *a* THROUGH *k*)	Exit Surveys	Exit Interviews	F.E. Exam	Senior Design Project
1, 3, 4	*a*. math, science & engineering	✔		✔	✔
1, 3, 4	*b*. design & conduct experiments	✔	✔		
1, 3, 4	*c*. design system, component, process	✔			✔
1, 3, 4	*d*. function on multi-disciplinary teams	✔			✔
1, 3, 4	*e*. identify, formulate & solve eng. problems	✔			✔
1, 2, 3, 4	*f*. professional & ethical responsibility	✔	✔	✔	
1, 3, 4	*g*. communicate effectively	✔	✔		✔
1, 3, 4	*h*. understand impact in global & societal context	✔			✔
1	*i*. life-long learning	✔	✔		
1	*j*. knowledge of contemporary issues		✔		✔
1, 3, 4	*k*. use techniques, skills and tools for eng. practice	✔			✔

1. **Table 3.F.2 Mapping of program educational objectives, outcomes and assessment methods from 2006-2007 to present**

PROGRAM EDUCATIONAL OBJECTIVES	PROGRAM OUTCOMES (ABBREVIATED FORM OF a THROUGH k)	Performance Appraisal	Exit Interviews	F.E. Exam	Senior Design Projects
1, 3, 4	*a*. math, science & engineering	370 Robertson 381 Ma		Riggs	
1, 3, 4	*b*. design & conduct experiments	320 Teng 485 Robertson			
1, 3, 4	*c*. design system, component, process	455 Ooi			490 Babcock
1, 3, 4	*d*. function on multi-disciplinary teams	490 Babcock			
1, 3, 4	*e*. identify, formulate & solve eng. Problems	320 Teng 485 Robertson			
1, 2, 3, 4	*f*. professional & ethical responsibility	489C Babcock		Riggs	
1, 3, 4	*g*. communicate effectively	462 Prevedouros 489C Babcock 490 Babcock	Riggs		
1, 3, 4	*h*. understand impact in global & societal context	464 Papacostas	Riggs		
1	*i*. life-long learning	462 Prevedouros	Riggs		
1	*j*. knowledge of contemporary issues	361 Prevedouros	Riggs		
1, 3, 4	*k*. use techniques, skills and tools for eng. Practice	482 Ma 455 Ooi		Riggs	

Table 3.F.3 Six-year cycle of assessment and evaluation activity

Activities	2006-2007 (2009-2010)											2007-2008 (2010-2011)											2008-2009 (2011-2012)										
	a. math, science & engineering - PA(CEE 370, 381), FE	*b.* design & conduct experiment - PA(CEE 320, 485)	*c.* design system, component, process - PA(CEE 455), DP	*d.* function on multi-disciplinary teams - PA(CEE 490)	*e.* identify, formulate & solve eng. problems - PA(CEE 320, 485)	*f.* professional & ethical responsibility - PA(CEE 489C), FE	*g.* communicate effectively - PA(CEE 462, 489C, 490), EI	*h.* understand impact in global & societal context - PA(CEE 464), EI	*i.* life-long learning -PA(CEE 462), EI	*j.* knowledge of contemporary issues - PA(CEE 361), EI	*k.* use techniques, skills and tools for eng. practice - PA(CEE 455, 482), FE	*a.* math, science & engineering - PA(CEE 370, 381), FE	*b.* design & conduct experiment - PA(CEE 320, 485)	*c.* design system, component, process - PA(CEE 455), DP	*d.* function on multi-disciplinary teams - PA(CEE 490)	*e.* identify, formulate & solve eng. problems - PA(CEE 320, 485)	*f.* professional & ethical responsibility - PA(CEE 489C), FE	*g.* communicate effectively - PA(CEE 462, 489C, 490), EI	*h.* understand impact in global & societal context - PA(CEE 464), EI	*i.* life-long learning -PA(CEE 462), EI	*j.* knowledge of contemporary issues - PA(CEE 361), EI	*k.* use techniques, skills and tools for eng. practice - PA(CEE 455, 482), FE	*a.* math, science & engineering - PA(CEE 370, 381), FE	*b.* design & conduct experiment - PA(CEE 320, 485)	*c.* design system, component, process - PA(CEE 455), DP	*d.* function on multi-disciplinary teams - PA(CEE 490)	*e.* identify, formulate & solve eng. problems - PA(CEE 320, 485)	*f.* professional & ethical responsibility - PA(CEE 489C), FE	*g.* communicate effectively - PA(CEE 462, 489C, 490), EI	*h.* understand impact in global & societal context - PA(CEE 464), EI	*i.* life-long learning -PA(CEE 462), EI	*j.* knowledge of contemporary issues - PA(CEE 361), EI	*k.* use techniques, skills and tools for eng. practice - PA(CEE 455, 482), FE
Review of performance criteria defining that outcome		•			•			•				•		•			•					•				•			•		•	•	
Lessons learnt from performance criteria				•			•		•	•			•			•			•				•		•			•					•
Review mapping and identify where data will be collected				•			•		•	•			•			•			•				•		•			•					•
Develop or review assessment methods				•			•		•	•			•			•			•				•		•			•					•
Collect and analyze data	•		•			•					•				•			•		•	•			•			•			•			
Evaluate assessment data including processes		•			•			•				•		•			•					•				•			•		•	•	
Report findings		•			•			•				•		•			•					•				•			•		•	•	
Take action where necessary		•			•			•				•		•			•					•				•			•		•	•	

Notes
1. PA = performance appraisal
2. FE = fundamentals of engineering exam
3. DP = Senior Design Project
4. EI = exit interview