APPENDIX I - ADDITIONAL PROGRAM INFORMATION

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A. TABULAR DATA FOR THE PROGRAM

TABLE I-1. Basic-Level Curriculum

Semester & Year	*Course (Department, Number, Title)*	*Credit Hours*			
		Math & Basic Science	*Engineering Topics*	*General*	*Other*
	Courses:				
Fall 01	CS 1321Computer Science 1				3
	MATH 1501Calculus 1	4			
	CHEM 1310 General Chemistry 1	4			
	History/Government Elective			3	
	ENGL 1101English Composition 1			3	
Spring 01	CEE/ME 1770 Engineering Graphics and Visualization		3*		
	MATH 1502 Calculus 2	4			
	PHYS 2211Introduction to Physics 1	4			
	Humanities Elective			3	
	ENGL 1102 English Composition 2			3	
Fall 02	CEE 2010 Computational Modeling in CEE		3		
	MATH 2401Calculus 3	4			
	PHYS 2212 Introduction to Physics 2	4			
	CEE/ISYE/MATH 3770 Probability and Statistics		3		
	Economics Elective (ECON 2100, 2105 or 2106)			3	
Spring 02	CEE 2020 Statics and Dynamics		3		
	MATH 2403 Differential Equations	4			
	CEE 3000 Civil Engineering Systems		3		
	BIOL 1510 Biological Principles	4			
	Health/Fitness Elective				2
Fall 03	CEE 3020 CE Materials		3		
	CE 3030 Strength of Materials		3		
	CEE 3040 Fluid Mechanics		3		
	Social Science Elective			3	
	EAS 2601 Earth Processes	4			
Spring 03	CEE Breadth Elective		3*		
	CEE Breadth Elective		3*		
	CEE 4200 Hydraulic Engineering		3		
	COE Technical Elective (MSE 3001, ME 3322, ChE 2110)		3		
	Ethics Elective (PST 3105, 3109 or 3127)			3	
Fall 04	CEE Breadth Elective		3*		
	CEE Technical Elective		3*		
	CEE Technical Elective		3*		
	COE Technical Elective (ECE 3710/3741, MSE 2001, ECE 2025)		3		
	Approved Elective				3

*Contains Significant Design

TABLE I-1. Basic-Level Curriculum
(continued)

Semester and Year	*Course (Description, Number and Title)*	*Credit Hours*			
		Math & Basic Science	*Engineering Topics*	*General*	*Other*
Spring 04	CEE Technical Elective		3*		
	CEE 4090 Capstone Design		3*		
	Approved Elective				3
	CEE Technical Elective		3*		
	Social Science Elective			3	
	Totals-ABET Basic-Level Requirements	**36**	**57**	**24**	**11**
OVERALL TOTAL FOR DEGREE:					
	PERCENTAGE OF TOTAL	**28**	**45**	**19**	**9**
Totals must satisfy one set	Minimum semester credit hours	32 hours	48 hours		
	Minimum percentage	25%	37.50%		

TABLE I-2. Course and Section Size Summary

(Department, Number, Title)	*No. of Sections Summer '01-Sping '02*	*Enrollment*	*Type of Class*			
			Lec. %	*Lab. %*	*Rec. %*	*Other %*
CEE/ME 1770 Intro to Engineering Graphics and Visualization	Summer '01 (3)	23	67	33	0	0
	Fall '01 (9)	33	67	33	0	0
	Spring '02 (9)	33	67	33	0	0
CEE 2010 Computational Modeling in Civil and Environmental Engineering	Summer '01 (1)	29	100	0	0	0
	Fa ll '01 (1)	66	100	0	0	0
	Spring '02 (1)	66	100	0	0	0
CEE 2020 Statics and Dynamics	Summer '01 (2)	44	100	0	0	0
	Fall '01 (9)	34	100	0	0	0
	Spring '02 (7)	37	100	0	0	0
CEE 3000 Civil Engineering Systems	Fall '01 (1)	65	100	0	0	0
	Spring '02 (1)	65	100	0	0	0
CEE 3010 Geomatics	Fall 01 (3)	14	67	33	0	0
	Spring '02 (2)	21	67	33	0	0
CEE 3020 Civil Engineering Materials	Summer '01 (2)	10	67	33	0	0
	Fall '01 (2)	17	67	33	0	0
	Sp '02 (4)	14	67	33	0	0
CEE 3030 Strength of Materials	Summer '01 (1)	27	100	0	0	0
	Fall '01 (1)	35	100	0	0	0
	Spring '02 (1)	69	100	0	0	0
CEE 3040 Fluid Mechanics	Su '01 (1)	20	100	0	0	0
	Fall '01 (1)	55	100	0	0	0
	Spring '02 (1)	43	100	0	0	0
CEE 3055 Structural Analysis	Summer '01 (1)	21	100	0	0	0
	Fall '01 (1)	31	100	0	0	0
	Spring '02 (1)	27	100	0	0	0
CEE 3770 Statistics and Applications	Spring '02 (1)	41	100	0	0	0
CEE 4090 Capstone Design	Summer '01 (1)	39	67	33	0	0
	Fall '01 (2)	28	67	33	0	0
	Spring '02 (1)	34	67	33	0	0
CEE 4100 Construction Engineering and Management	Summer '01 (1)	38	100	0	0	0
	Fall '01 (1)	39	100	0	0	0
	Spring '02 (1)	53	100	0	0	0
CEE 4110 Construction Plan, Est, & Sched	Fall '01 (1)	38	100	0	0	0
CEE 4200 Hydraulic Engineering	Summer '01 (2)	20	67	33	0	0
	Fall '01 (3)	9	67	33	0	0
	Spring '02 (3)	19	67	33	0	0
CEE 4210 Hydrology	Fall '01 (1)	26	100	0	0	0
CEE 4230 Environmental Transport Modeling	Fall '01 (1)	2	100	0	0	0

	Spring '02 (1)	12	100	0	0	0
CEE 4300 Environmental Engineering Systems	Summer '01 (1)	23	100	0	0	0
	Fall '01 (1)	14	100	0	0	0
	Spring '02 (1)	25	100	0	0	0

TABLE I-2. Course and Section Size Summary
(continued)

(Department, Number, Title)	*No. of Sections Summer '01-Sping '02*	*Enrollment*	*Type of Class*			
			Lec. %	*Lab %*	*Rec. %*	*Other %*
CEE 4310 Water Quality Engineering	Fall '01 (1)	23	100	0	0	0
CEE 4320 Hazardous Substance	Spring '02 (1)	26	100	0	0	0
CEE 4330 Air Pollution Engineering	Fall '01 (1)	19	100	0	0	0
CEE 4400 Geosystems Engineering	Summer '01 (1)	29	100	0	0	0
	Spring '02 (1)	33	100	0	0	0
CEE 4410 Geosystems Engineering Design	Fall '01 (1)	7	100	0	0	
CEE 4420 Subsurface Characterization	Spring '02 (1)	9	67	33		0
CEE 4510 Structural Steel Design	Fall '01 (1)	27	100	0	0	0
	Spring '02 (1)	12	100	0	0	0
CEE 4520 Reinforced Concrete Design	Summer '01 (1)	21	100	0	0	
	Fall '01 (1)	4	100	0	0	0
	Spring '02 (1)	32	100	0	0	0
CEE 4530 Timber and Masonry Design	Fall '01 (1)	23	100	0		0
CEE 4550 Structural Analysis II	Fall '01 (1)	45	100	0		0
CEE 4600 Transportation Planning, Operations, and Design	Summer '01 (2)	19	67	33	0	0
	Fall '01 (2)	14	67	33	0	
	Spring '02 (2)	18	67	33	0	0
CEE 4610 Multimodal Trans, Planning Design & Operations	Fall '01 (1)	22	100	0	0	0
CEE 4803 Prestressed Concrete	Summer '01 (1)	4	100	0	0	0
CEE 4803 Computer-Aided Structural Engineering	Summer '01 (1)	4	100	0	0	0
CEE 4803 Env Conscious-Design & Construction	Spring '02 (1)	24	100	0	0	0

Table 1-3. Faculty Workload Summary.

Last Name, First Name	*FT or PT*	*Course Nos. (Credit Hours) Su '01- Sp '02*	*% Teaching*	*% Research*	*% Other(*)*
Amekudzi, Adjo	FT	Fall 2001: CEE3000 + (3); Fall 2001: CEE6651 (3)	45	45	10 (S)
Amirtharajah, Appiah	FT	Summer 2001: CEE7310 (3); Fall 2001: CEE4090 (3) Spring 2002: CEE6330++ (3)	40	40	20 (S)
Aral,Mustafa M	FT	Fall 2001: CEE6271 (3); Spring 2002: CEE6272 (3)	30	50	20 (S)
Baker, Nelson	FT	Fall 2001: CEE1770 (3); Fall 2001: CEE6581 (3) Spring 2002: CEE1770 (3); Spring 2002: CEE6583 (3)	45	20	35 (A)
Bergin, Michael	FT	Fall 2001: CEE4330 (3); Fall 2001: EAS6111 (2) Spring 2002: CEE6391 (1); Spring 2002: EAS4610 (3) Spring 2002: EAS6790++ (3)	40	50	10 (S)
Chinowsky, Paul	FT	Fall 2001: CEE6100 (3); Fall 2001: CEE8091 (1) Spring 2002: CEE6130 (3); Spring 2002: CEE6180 (3) Spring 2002: CEE8091 (1)	35	40	25 (S)
Daniel, Bill	PT	Fall 2001: CEE 3010; Spring 2002: CEE 3010+	100	0	0
DesRoches, Reginald	FT	Fall 2001: CEE3055 (3); Spring 2002: CEE4520 (3) Spring 2002: CEE6541 (3); Spring 2002: CEE8800 (1)	40	50	10(S)
Dixon, Karen	FT	Fall 2001: CEE4600 (3); Spring 2002: CEE6604 (3) Spring 2002: CEE6644 (3)	30	50	20 (S)
Ellingwood, Bruce	FT	Spring 2002: CEE3770+ (3)	10	15	75 (A)
Elrod, David	FT	Summer 2001: CEE1770 (3); Fall 2001: CEE1770 (3)	100	0	0

		Spring 2002: CEE1770 (3)			
Emkin, Leroy	FT	Summer 2001: CEE3055 (3); Summer 2001: CEE4090 (3) Fall 2001: CEE6501 (3); Spring 2002: CEE3055 (3)	40	15	45 (A)
Frost, David	FT	Fall 2001: CEE6421 (3)	20	40	40 (A)
Georgakakos, Aris	FT	Fall 2001: CEE4210+ (3); Fall 2001: CEE6231A (3) Fall 2001: CEE8800 (1); Spring 2002: CEE4210 (3) Spring 2002: CEE6241 (3); Spring 2002: CEE8800 (1)	25	40	35 (A)
Germanovich, Leonid	FT	Fall 2001: CEE2020G (3); Spring 2002: CEE6482 (3) Spring 2002: EAS6751 (3)	40	40	20 (A)
Goodno, Barry J	FT	Fall 2001: CEE6510 (3); Spring 2002: CEE2020 (3) Spring 2002: CEE4090+ (3)	40	15	35 (S)
Guensler, Randy	FT	Fall 2001: CEE6602 (4); Fall 2001: CP6311 (4)	15	45	40 (S)
Haj-Ali, Rami	FT	Fall 2001: CEE2020 (3); Spring 2002: CEE7792A (3)	40	50	10 (S)
Huang, Ching Hua	FT	Fall 2001: CEE6312++ (3); Spring 2002: CEE63191 (3) Spring 2002: CEE6350++ (3)	40	50	10 (S)
Jacobs, Laurence	FT	Fall 2001: CEE2020 (3); Fall 2001: CEE6551 (3) Spring 2002: CEE3030+ (3)	40	25	35 (A)
Kahn, Lawrence	FT	Summer 2001: CEE4803 (3); Summer 2001: CEE6523 (3) Fall 2001: CEE4530 (3); Fall 2001: CEE6521 (3) Spring 2002: CEE6522 (3); Spring 2002: CEE6536 (3)	50	25	25 (S)
		(continued on next page)			

+ Plus two GTREP sections ***S: Service*** ***A: Administrative*** ***L: Leave***
++ Plus one video section

Table I-3. Faculty Workload Summary. (continued)

Last Name, First Name	*FT or PT*	*Course Nos. (Credit Hours) Su '01- Sp '02*	*% Teaching*	*% Research*	*% Other (*)*
Kurtis, Kimberly	FT	Fall 2001: CEE3020 (3); Spring 2002: CEE3020 (3)	40	50	10 (S)
Leon, Roberto	FT	Fall 2001: CEE4520 (3); Spring 2002: CEE4090+ (3) Spring 2002: CEE4510 (3)	35	40	25 (S)
Leonard, John	FT	Fall 2001: CEE8800 (1); Spring 2002: CEE8800 (1) Spring 2002: CS8801 (1)	30	30	40 (L)
Loeffler, Frank	FT	Fall 2001: CEE6351 (3); Spring 2002: CEE6319 (3) Spring 2002: CEE8094 (3)	40	50	10 (S)
Mayne, Paul	FT	Fall 2001: CEE4410 (3); Fall 2001: CEE6423 (3) Spring 2002: CEE6443 (3)	40	35	25 (S)
Meyer, Michael	FT	Fall 2001: CEE6602 (4); Fall 2001: CEE6642 (3) Spring 2002: CEE3000 (3); Spring 2002: CEE6605 (3)	40	35	25 (S)
Mulholland, James	FT	Fall 2001: CEE4300 (3); Fall 2001: CEE6391 (3) Spring 2002: CEE6390++ (3)	40	50	10 (S)
Pavlostathis, Spyros G	FT	Fall 2001: CEE6311++; Spring 2002: CEE6331++ Spring 2002: CEE8095 (1)	35	45	20(S)
Pennell, Kurt	FT	Fall 2001: CEE6333++ (3); Spring 2002: CEE4320+ (3) Spring 2002: CEE6313++ (3)	25	50	20 (S)
Philobos, Mahera	FT	Fall 2001: CEE2020 (3); Fall 2001: CEE2020 (3) Spring 2002: CEE2020 (3); Spring 2002: CEE2020 (3)	100	0	0
Puzrin, Alexander	FT	Fall 2002: CEE4400 (3)	40	50	25 (S)
Rix, Glenn	FT	Summer 2001: CEE4400 (3); Fall 2001: CEE6445 (3)	30	40	10(S)

		Spring 2002: CEE4420+ (3); Spring 2002: CEE6442 (3)			
Roberts, Phil	FT	Fall 2001: CEE4230 (3); Fall 2001: CEE6261 (3) Spring 2002: CEE6262++ (3)	35	40	25 (S)
Rodgers, Mike	FT	Fall 2001: CEE4090 (3); Fall 2001: CEE6601 (4) Spring 2002: CEE6625 (3)	30	50	20 (S)
Rosenstein, Lisa	FT	Fall 2001: CEE6754 (3); Fall 2001: CEE8802 (3) Fall 2001: MSE67540 (3); Fall 2001: MSE8001 (3) Spring 2002: CEE6754 (3); Spring 2002: MSE6754 (3) Spring 2002: MSE8001 (3)	70	0	30 (S)
Russell, Ted	FT	Fall 2001: CEE6391 (3); Fall 2001: CEE6790++ (3) Fall 2001: CEE8802++ (3);Spring 2002: EAS6790++ (3)	25	50	25 (S)
Santamarina, Carlos	FT	Fall 2001: CEE6402 (3); Spring 2002: CEE6462 (3) Spring 2002: CEE6485 (3)	30	50	20 (S)
Saunders, Michael	FT	Summer 2001: CEE4300+ (3); Fall 2001: CEE4310+ (3) Fall 2001: CEE6361 (3); Spring 2002: CEE4300+ (3) Spring 2002: CEE6355 (3)	30	45	25(S)
Sotiropoulos, Fotis	FT	Fall 2001: CEE3040 (3); Spring 2002: CEE3040 (3) Spring 2002: CEE8802 (3)	35	50	15 (S)
Sturm, Terry	FT	Summer 2001: CEE3040+ (3); Fall 2001: CEE4200+ (3) Fall 2001: CEE6281 (3); Spring 2002: CEE6282 (3)	40	40	20 (S)

+Plus two GTREP sections ***S: Service*** ***A: Administrative*** ***L: Leave***
++Plus one video section

TABLE I-3. Faculty Workload Summary. (continued)

Last Name, First Name	*FT or PT*	*Course Nos. (Credit Hours) Su '01- Sp '02*	*% Teaching*	*% Research*	*% Other(*)*
Vanegas, Jorge	FT	Summer 2001: CEE4100 (3); Fall 2001: CEE4100+ (3) Fall 2001: CEE4110 (3); Spring 2002: CEE4100 (3) Spring 2002: CEE4120 (3); Spring 2002: CEE4803 (3) Spring 2002: CEE6120 (3)	60	10	30 (S)
Webster, Don	FT	Summer 2001: CEE4200 (3); Fall 2001: CEE6251 (3) Spring 2002: CEE4201 (3)	40	50	10 (S)
White, Don	FT	Fall 2001: CEE3030 (3); Spring 2002: CEE2020 (3) Spring 2002: CEE2020 (3)	40	40	20 (S)
Will, Mac	FT	Summer 2001: CEE3030 (3); Summer 2001: CEE6544 (3) Fall 2001: CEE4550 (3) ;Spring 2002: CEE6504 (3)	50	15	35 (A)
Williams, Billy	FT	Summer 2001: CEE4600 (3); Fall 2001: CEE6603 (3) Spring 2002: CEE4600 (3); Spring 2002: CEE6636 (3)	40	50	10 (S)
Yiacoumi, Sotira	FT	Fall 2001: CEE6310++ (3); Fall 2001: CEE7310 (3) Fall 2001: CEE8095 (1); Spring 2002: CEE6332++ (3)	35	50	15 (S)
Yin, Wan-Lee	FT	Summer 2001: CEE2020 (3); Summer 2001: CEE2020 (3) Fall 2001: CEE2020 (3); Fall 2001: CEE2020 (3) Fall 2001: CEE2020 (3); Spring 2002: CEE2020++ (3)	70	20	10 (S)
Zureick, Abdul	FT	Fall 2001: CEE4510 (3); Spring 2002: CEE6527 (3) Spring 2002: CEE6536 (3)	30	50	20 (S)

+ Plus two GTREP sections ***S: Service*** ***A: Administrative*** ***L: Leave***

++ ***Plus one video section***

TABLE I-4. Faculty Analysis

Last Name, First Name	*Rank**	*FT or PT*	*Highest Degree, Institution, Year*	*Years of Experience*		*P.E. State*	*Professional Societies (**)*	*Activity Level: 01-02 (high, medium, low, none)*	
				Gov & Ind.	*Faculty Total @ GT*			*Research*	*Consulting*
Amekudzi, Adjo	Astp	FT	PhD, Carnegie Mellon, 1999	1	3		ASCE,TRB, ASEE,APWA	High	none
Amirtharajah, Appiah	Prof	FT	PhD, Iowa State, 1971	10	16	MT	AWWA,WEF, ACS,ASCE, IAWQ,IWSA, AEEP	High	medium
Aral,Mustafa M	Prof	FT	PhD, Georgia Tech 1971	0	22	GA	ASCE,AGU, GSPE,AIH, NGA	High	low
Baker, Nelson	Asop	FT	PhD, Carnegie Mellon University '89	0	13		ASCE,ASEE, ACM	medium	low
Bergin, Michael	Astp	FT	PhD Carnegie Mellon, 1995	2	4		AAAR,ACS, AGU	High	none
Chinowsky, Paul	Asop	FT	PhD, Stanford, 1991	3	9		ASCE,ASEE	medium	low
Daniel, Bill	Inst	PT							
DesRoches, Reginald	Astp	FT	PhD, Cal, Berkeley, 1998	0	5		ASCE	High	none
Dixon, Karen	Asop	FT	PhD, NC State, 1995	11	7	GA / NC / AZ	ASCE,ITE, TRB	High	none
Ellingwood, Bruce	Prof	FT	PhD, Illinois, Urbana, 1972	14	2	DC	AISC,ASCE, ACI	medium	low
Elrod, David	Acp	FT	PhD, Texas A & M, 1988	0	3		ASME, NSRCL	None	none
Emkin, Leroy	Prof	FT	PhD, MIT 1970	0	33	GA		High	low
Frost, David	Prof	FT	PhD, Purdue, 1989	0	10	IN / CAN ADA	ASCE,EIC, CGS,SSA, NAGS CUREE, SMSFB	High	low
Georgakakos, Aris	Prof	FT	PhD, MIT, 1984	0	18		AGU,ASCE, IEEE, IAHR, NWSAT, AWRA, GWRI, GWRPC	High	medium

ASTP = ASSISTANT PROFESSOR *PROF = PROFESSOR* *INST = INSTRUCTOR*
ASOP = ASSOCIATE PROFESSOR *ACP = ACADEMIC PROFESSIONAL* *RS = RESEARCH SCIENTIST*

TABLE I-4. Faculty Analysis
(continued)

Last Name, First Name	*Rank**	*FT Or PT*	*Highest Degree, Institution Year*	*Years of Experience*		*P.E. State*	*Professional Societies*	*Activity Level: 01-02 (high, medium, low, none)*	
				Gov & Ind.	*Faculty Total @ GT*			*Research*	*Consulting*
Germanovich, Leonid	Prof	FT	PhD, Moscow St. Mining, 1982	1	4		AGU,ISRM, SRE	high	none
Goodno, Barry J	Prof	FT	Ph.D. Stanford, 1975	3	28	GA	ASCE,EERI, SSA, PCI,MAEC, SEI	medium	low
Guensler, Randy	Asop	FT	PhD, California Davis, 1993	7	8		TRB,TAQ, AWMA,ASCE EEAT,SAE, NRC	high	medium
Haj-Ali, Rami	Astp	FT	PhD, Illinois, 1996	0	5		ASCE	high	none
Huang, Ching Hua	Astp	FT	PhD, Johns Hopkins, 1997	0	2		ACS,SETC, AWWA, AEESP	high	none
Jacobs, Laurence	Prof	FT	PhD, Columbia, 1987	3	14		ASA,ASEE, ASCE,ASME	high	low
Kahn, Lawrence	Asop	FT	PhD, Michigan , 1976	5	26	CA	ACI,ASCE, TMS	medium	medium
Kurtis, Kimberly	Astp	FT	PhD, Cal Berkley, 1998	0	3		ACI,ASCE, TRB	high	none
Leon, Roberto	Prof	FT	PhD, Texas, 1983	0	7	MN	ACI,ASCE, BSSC, CUREE	high	low
Leonard, John	Asop	FT	PhD, Cal Irvine, 1991	2	9		SSRC	high	low
Loeffler, Frank	Astp	FT	PhD, Univ. of Hobenheim, 1994	0	3		ASM,AAAS, AvHAA, VAAM	high	none
Mayne, Paul	Prof	FT	PhD, Cornell, 1991	11	12	DC / VA	ASCE,ASTM, ISSMGE, TRB, CGS,ADSC, DFI	medium	high
Meyer, Michael	Prof	FT	PhD, MIT, 1978	5	14	GA	TRB,ASCE, ITO, NTOD	medium	medium
Mulholland, James	Asop	FT	PhD, MIT, 1992	7	10		CI,AEEP, AWMA	medium	low
Pavlostathis, Spyros G	Prof	FT	PhD, Cornell, 1985	3	11		ACS,ASCE, ASM,AEESP, GWPCA, IWA SETC,WEF, WERF	high	medium

ASTP = ASSISTANT PROFESSOR *PROF = PROFESSOR* *INST = INSTRUCTOR*
ASOP = ASSOCIATE PROFESSOR *ACP = ACADEMIC PROFESSIONAL* *RS = RESEARCH SCIENTIST*

TABLE I-4. Faculty Analysis
(continued)

Last Name, First Name	*Rank**	*FT Or PT*	*Highest Degree, Institution, Year*	*Years of Experience*		*P.E. State*	*Professional Societies*	*Activity Level: 01-02 (high, medium, low, none)*	
				Gov. & Ind.	*Faculty Total @ GT*			*Research*	*Consulting*
Pennell, Kurt	Asop	FT	PhD, Florida, 1990	0	7		SSSA, ASCE,	high	low
Philobos, Mahera	Acp	FT	PhD, Georgia Tech, 1994	0	8		ASCE,ASC, WEPAM, ABWA, SWE, MMT	none	none
Puzrin, Alexander	Asop	FT	PhD, Israel Inst., 1997	0	1		IIS	high	none
Rix, Glenn	Asop	FT	PhD, Texas, 1988	0	13		ASCE,TRB, ASEE,EERI	medium	medium
Roberts, Phil	Prof	FT	PhD, Cal Tech, 1977	2	24	GA	ASCE,IAHR, IAWQ, IWA	medium	medium
Rodgers, Mike	RS	FT	PhD, Georgia Tech, 1986	2	24		AGU, SAE, AAAS, APS, AWMA	high	medium
Rosenstein, Lisa	Acp	FT	PhD, Emory, 1989	0	6			none	none
Russell, Ted	Prof	FT	PhD, Cal Tech, 1985	2	6		AAAR, TRB, NRC, RSAC, CARB	high	low
Santamarina, Carlos	Prof	FT	PhD, Purdue, 1987	0	6			high	low
Saunders, Michael	Prof	FT	PhD, Illinois, 1975	0	28	GA	AIPP, AAAS, ACS, ASM, ASCE, AEESP, GWPCA, IWA, WEF	medium	medium
Sotiropoulos, Fotis	Asop	FT	PhD, Cincinnati, 1991	0	7		ASME,ASCE, APS	high	none
Sturm, Terry	Prof	FT	PhD, Iowa, 1976	0	24	IN	ASCE, AGU, FHWA, AWRA	medium	low
Vanegas, Jorge	Asop	FT	PhD, Stanford, 1988	0	9		ASCE,LEAD, COHEMIS, NCCER, HACU	medium	medium
Webster, Don	Astp	FT	PhD, Cal Berkeley, 1994	0	5		ASCE, ASME, APS, ASLO	high	none
White, Don	Asop	FT	PhD, Cornell, 1988	1.5	6		AISC, EERI, EJSE, FHA, SSRC	medium	low

ASTP = ASSISTANT PROFESSOR *PROF = PROFESSOR* *INST = INSTRUCTOR*
Asop = Associate Professor *Acp = Academic Professional* *RS = Research Scientist*

TABLE I-4. Faculty Analysis
(continued)

Last Name, First Name	*Rank**	*FT Or PT*	*Highest Degree, Institution, Year*	*Years of Experience*		*P.E. State*	*Professional Societies*	*Activity Level: 01-02 (high, medium, low, none)*	
				Gov. & Ind.	*Faculty Total @ GT*			*Research*	*Consulting*
Will, Mac	Asop	FT	PhD, Texas, 1975	0	23	GA	ASCE, TCCIT, TAC	low	low
Williams, Billy	Astp	FT	PhD, Virginia, 1999	0	3	CA / NC / VA	ASCE, ASEE, IEEE, ITE, SAME, TRB	high	none
Yiacoumi, Sotira	Asop	FT	PhD, Syracuse, 1992	0	10		CSSS, AICHE	high	low
Yin, Wan-Lee	Prof	FT	PhD, Brown, 1969	2	19		SNP	low	none
Zureick, Abdul	Prof	FT	PhD, Illinois, 1985	0	17		ASME, ASCE, AAM, SEC, ASTM, TRB, IABSE	high	low

ASTP = ASSISTANT PROFESSOR *PROF = PROFESSOR* *INST = INSTRUCTOR*
Asop = Associate Professor *Acp = Academic Professional* *RS = Research Scientist*

TABLE I-5. PROGRAM SUPPORT EXPENDITURES

Expenditure	*FY 00*	*FY 01*	*FY 02*	*FY 03*
Personal Services	$ 12,719,507.04	$ 12,317,993.29	$ 12,310,574.78	$ 12,711,000.00
Materials & Supplies	$ 1,654,520.43	$ 1,542,070.79	$ 2,051,756.36	$ 2,100,000.00
Subcontracts	$ 205,713.47	$ 436,390.49	$ 1,834,313.94	$ 1,500,000.00
Travel	$ 353,466.39	$ 367,586.91	$ 281,858.10	$ 325,000.00
Equipment	$ 1,026,983.07	$ 690,272.94	$ 724,873.48	$ 800,000.00
Total Direct Expenditures	$ 15,960,190.40	$ 15,354,314.42	$ 17,203,376.66	$ 17,436,000.00
F&A Recoveries	$ 1,735,300.00	$ 1,619,500.00	$ 1,730,800.00	$ 1,900,000.00
Total	$ 17,695,490.40	$ 16,973,814.42	$ 18,934,176.66	$ 19,336,000.00

TABLE I-6. Processes for Achieving Program Outcomes

Processes	*Program Outcomes*						
	1	**2**	**3**	**4**	**5**	**6**	**7**
1. Include courses within the curriculum that address specific topics that support the Program Outcomes.	X	X	X	X	X	X	
2. Offer seminars, lecture series, and other special events to strengthen the interface between the classroom environment and the world of professional practice.	X	X	X	X	X	X	
3. Provide a laboratory hands-on experience on selected topics.			X				
4. Provide an integrated design experience			X		X		
5. Provide a technological infrastructure of support to the academic and research programs of CEE.		X	X	X			
6. Implement major educational enhancement and curriculum development initiatives.	X	X	X	X	X		X
7. Incorporate innovative pedagogical approaches in selected courses.							X
8. Request recommendations on curriculum content and delivery to the CEE External Advisory Board.	X	X	X	X	X	X	X
9. Request recommendations on curriculum content and delivery to the CEE Student Advisory Board	X	X	X	X	X		X
10. Facilitate the participation of students in co-op or internship programs.	X	X	X	X	X	X	
11. Actively involve undergraduate students in research experiences	X	X	X	X	X	X	
12. Use programs like FASET to enhance retention of students							X
13. Establish minimum grade requirements for certain courses and/or activities.		X	X	X	X		
14. Promote development of faculty and staff.							X
15. Promote and support selected activities of student chapters of						X	X
16. Encourage student participation in national technical forums and academic competitions					X	X	
17. Advise students through academic and career advising systems.	X	X	X	X	X	X	X

TABLE I-7. Methods Used to Assess Program Outcomes

Processes	***Program Outcomes***						
Assessment methods	**1**	**2**	**3**	**4**	**5**	**6**	**7**
1. Conduct Exit Interviews	X	X	X	X	X	X	X
2. Conduct alumni surveys.	X	X	X	X	X	X	X
3. Maintain audit records of courses taken and grades through use of academic program flow charts.	X	X	X	X	X	X	
4. Conduct Course Instructor Opinion Surveys (CIOS)	X	X	X	X	X		
5. Conduct Center for Enhancement of Teaching and Learning (CETL) evaluations using videotapes and analysis of class lectures. 6.							X
7. Request feedback from the CEE External Advisory Board.	X	X	X	X	X	X	
8. Request feedback from the Student Advisory Groups.	X	X	X	X	X		
9. Maintain records of external reviews, particularly national rankings.	X	X	X	X	X	X	X
10. Maintain records of the number and amount of endowment, fellowships, and scholarships available to support students' education.							X
11. Maintain records of how many students take and pass FE exam.	X	X	X	X	X	X	
12. Maintain records of EAC/ABET accreditation reviews and reports.	X	X	X	X	X	X	X
13. Assessment of Communication Skills of Students					X		
14. Maintain records of how many students continue with Graduate School.							X
15. Maintain records of student employment status after graduation.	X	X	X	X	X	X	X
16. Conduct strategic planning to assess future directions. 17.	X	X	X	X	X	X	X
18. Conduct systematic benchmarking of the academic program with peer programs.	X	X	X	X	X	X	

TABLE I-8. Program Changes Resulting from Assessment Process

Need	**Identified By**	*Action or Status*
Adopt Systems Perspective on planning, design and impact of engineered facilities	EAB/Benchmarking/ Strategic Planning/Faculty	Developed required Systems Class (CEE 3000)
Incorporate communications throughout CE curriculum	Students/Faculty/ EAB/Alumni	Hire Dr. Lisa Rosenstein. Modify curriculum to expose students to communication skills enhancement within context of CEE classes
More flexibility within curriculum	Students/Faculty/EAB	Changed BSCE curriculum to require three of five CEE breadth classes
Computer Lab update	Faculty/Students	Significant Upgrade of computers and appropriate software
Lack of copying facilities within Mason building for students	Students; Exit Interviews	Installed coin operated copy machine in Mason
After-hours access to computer lab	Students; Exit Interviews; Focus Groups	Develop process where student can take a ISG class and obtain 24 hour access
Increase undergraduate student research opportunities	Students; Exit Interviews/Faculty	Develop pilot program where CEE fully funds 3 undergraduate researchers for the summer
More exposure to environmental engineering and science	Faculty/Students; Exit Interviews	Develop special topics class: Engineering and the Environment; Assess effectiveness and possible require
Integration of Computer Science in BSCE curriculum	Students; Exit Interviews/Faculty/ Alumni	Developing new computer science/CEE computing sequence
Instruction in Lab Safety	EAB/Faculty	Develop new lab safety procedure for undergraduate lab
To develop engineering talent and leadership in key student	School Chair; IIIi Committee	Institute formal 5-yr BS/MS program of study in CEE
Facilitate distance learning opportunities for CEE students and integrate the Atlanta and GTREP experiences for undergraduates	External Advisory Board; School Committee on Educational Initiatives	Renovate Mason 142A to provide technology for enhancing distance learning
Enhance communications among students and faculty in different disciplinary areas within the school	School management committee; student exit interviews.	Institute distinguished lecture series, coincident with the ASCE Sesquecentennial celebration.
Identify future (5 – 10 yr timeframe) challenges for civil and environmental engineering practice	External Advisory Board; School Faculty	Faculty offsite; strategic planning
Improve interaction between undergraduates and the CEE profession	Student exit surveys; student focus group	Change EAB by-laws to form Board Committees on Student Affairs and on Professional Outreach, charged with enhancing student-alumni relations, mentoring, and providing opportunities for internships and co-op experiences
Funding to provide financial support for student participation in regional and national competitions	ASCE Student Chapter officers	Targeted development activities to provide permanent endowment specifically for support of ASCE Student Chapter activities and participation of distinguished lecturers in

Table I-9. Course Objectives for Required and Elective Courses Related to Program Outcomes.

CEE Courses		*Required (R), Breadth (B), or Elective (E)*	*Program Outcomes*
CEE/ME 1770	Introduction to Engineering Graphics and Visualization	R	2,3,5,6,7
CEE 2010	Computational Modeling in CEE	R	2,7
CEE 2020	Statics and Dynamics	R	2,3,7
CEE 3000	Civil Engineering Systems	R	1,2,3,5,6,7
CEE 3010	Geomatics	E	2, 3, 4
CEE 3020	Civil Engineering Materials	R	1,2,3,4,5,7
CEE 3030	Strength of Materials	R	2.3.7
CEE 3040	Fluid Mechanics	R	2,3,7
CEE 3055	Structural Analysis	B	2,3,7
CEE 3770	Statistics and Applications	R	2,3,4,7
CEE 4090	Capstone Design	R	1,2,3,4,5,6,7
CEE 4100	Construction Engineering and Management	B	1,2,3,4.5,6,7
CEE 4110	Construction Planning, Estimating and Scheduling	E	1,2,3,4,5,6,7
CEE 4120	Construction Equipment and Methods	E	1,2,3,4,5,6,7
CEE 4200	Hydraulic Engineering	R	2,3,4,5,7
CEE 4210	Hydrology	E	1,2,3,5,6,7
CEE 4230	Environmental Transport Modeling	E	1,2,3,4,6,7
CEE 4300	Environmental Engineering Systems	B	1,2,3,5,6,7
CEE 4310	Water Quality Engineering	E	1,2,3,4,5,6,7
CEE 4320	Hazardous Substance Engineering	E	2,3,4,5,6,7
CEE 4330	Air Pollution Engineering	E	1,2,3,7
CEE 4390	Environmental Engineering/ Water Resources Design	E	1.3.4.5
CEE 4400	Geosystems Engineering	B	1,2,3,4
CEE 4410	Geosystems Engineering Design	E	1,2,3,5,6
CEE 4420	Subsurface Characterization	E	1,2,3,4, 5,6
CEE 4510	Structural Steel Design	E	2,3,6,7
CEE 4520	Reinforced Concrete Design	E	2,3,5,7
CEE 4530	Timber and Masonry Design	E	1,2,3,5,6,7
CEE 4550	Structural Analysis II	E	2,3,4,7
CEE 4600	Transportation Planning, Operations and Design	B	1,2,3,5,7
CEE 4610	Multimodal Transportation Planning, Design and Operations	E	1,2,3,7
CEE 4620	Environmental Impact Assessment	E	1,2,3,5,6,7
CEE 4630	Computer-Aided Site and Roadway Design	E	1,2,3,6,7
CEE 4795	Groundwater Hydrology	E	2,3,4,5,6,7
CEE 4900	Undergraduate Honors Research Project	E	1,2,3,4,5,6,7
CEE 4901-2-3	Special Problems	E	1,2,3,4,5,6,7

TABLE I-10. EXAMPLE OF EXIT SURVEYS

GEORGIA TECH UNDERGRADUATE EXIT SURVEY

To help us improve our programs and services, please answer the following questions with respect to your undergraduate education at Georgia Tech. Some questions have multiple parts, so you may want to read all the parts before responding. **Any and all information you provide will be held in strict professional confidence, used only for program evaluation, and will only be reported in a format where your individual responses cannot be identified. Your participation is voluntary and will not affect your status at Georgia Tech.**

Your name: _____Your program: _____Your student ID number:

Expected semester of graduation: O Fall O Spring O Summer 20____

I. FACULTY CONTRIBUTIONS

To what extent did the instructors you have had in your major do each of the following:

	EXCELLENT	GOOD	FAIR	POOR	NO OPINION
Set high expectations for learning	O	O	O	O	O
Encourage you to be an actively involved learner	O	O	O	O	O
Exhibit proficiency in the field of instruction	O	O	O	O	O
Show concern for student learning	O	O	O	O	O
Provide feedback frequently and promptly	O	O	O	O	O
Effectively communicate critical concepts and ideas.	O	O	O	O	O
Encourage student-faculty interaction, in and outside the classroom	O	O	O	O	O
Encourage you to devote sufficient time and energy to your coursework	O	O	O	O	O
Incorporate teamwork as part of the learning process	O	O	O	O	O

II. KNOWLEDGE AND SKILLS

To what extent did your college education contribute to your knowledge, skills, and personal development in the following areas?

	VERY MUCH	SOMEWHAT	VERY LITTLE	NOT AT ALL	N/A
Writing skills (e.g. ability to write reports and/or express ideas and opinions clearly and concisely)	O	O	O	O	O
Communication skills	O	O	O	O	O
Listening skills	O	O	O	O	O
Development of problem solving skills	O	O	O	O	O
Development of mathematics skills	O	O	O	O	O
Development of computing skills	O	O	O	O	O
Ability to think critically and logically	O	O	O	O	O
Understanding of technology applications relevant to field of study	O	O	O	O	O
Understanding the role of your discipline in solving global problems	O	O	O	O	O
Applying scientific methods of inquiry	O	O	O	O	O
Ability to make ethically responsible decisions	O	O	O	O	O
Development of an appreciation for different cultures.	O	O	O	O	O
Ability to work with individuals from diverse backgrounds	O	O	O	O	O
Ability to work in multi-disciplinary teams	O	O	O	O	O
Ability to carry out projects independently	O	O	O	O	O
Development of leadership skills	O	O	O	O	O
Development of time management skills	O	O	O	O	O
Understanding of current events	O	O	O	O	O
Commitment to life long learning.	O	O	O	O	O

III. Facilities and Academic Resources

Please rate each of the following::

	EXCELLENT	GOOD	FAIR	POOR	DON'T KNOW/ DIDN'T USE
Advising in your major					
Career Advising	O	O	O	O	O
Access to advisor	O	O	O	O	O
Sufficient time with advisor	O	O	O	O	O
Accurate information about degree requirements and course sequencing	O	O	O	O	O
Assistance with major concentration and elective selection	O	O	O	O	O
Library services					
Hours of operation	O	O	O	O	O
Access to databases and collections both physically and on-line	O	O	O	O	O
Staff responsiveness	O	O	O	O	O
Information Technology/Computer services					
Access to the Internet	O	O	O	O	O
Network functioning	O	O	O	O	O
Access to computer labs…	O	O	O	O	O
Quality of computer labs	O	O	O	O	O
Helpfulness of technology personnel (i.e. lab assistants, OIT, Resnet)	O	O	O	O	O
Career services/Employment search assistance					
Access to career services staff	O	O	O	O	O
Helpfulness of career services.	O	O	O	O	O
Timely information regarding information sessions and job opportunity	O	O	O	O	O
Quality and access to job postings (i.e. databases, career fairs)	O	O	O	O	O
Resume preparation	O	O	O	O	O
Interview preparation skills	O	O	O	O	O
Support in using job search software applications	O	O	O	O	O
Staff responsiveness overall	O	O	O	O	O
Building Facilities					
Access to study areas.	O	O	O	O	O
Quality of study areas	O	O	O	O	O
Quality of classrooms	O	O	O	O	O
Quality of laboratories	O	O	O	O	O
Standard of technology available in classrooms	O	O	O	O	O

IV. Administrative and Student Services

Please rate the quality of service you received from the following units:

	EXCELLENT	GOOD	FAIR	POOR	DON'T KNOW/ DIDN'T USE
Admissions	O	O	O	O	O
All Campus (Buzz) Card Office	O	O	O	O	O
Bookstore	O	O	O	O	O
Bursar's Office	O	O	O	O	O
Campus Police	O	O	O	O	O
Campus Transportation (Stinger)	O	O	O	O	O
Co-Operative Division	O	O	O	O	O
Financial Aid	O	O	O	O	O
Housing Office	O	O	O	O	O
Parking Office	O	O	O	O	O
Registrar's Office	O	O	O	O	O

Student Athletic Complex (SAC)	O	O	O	O	O
Student Center	O	O	O	O	O
Student Health Center	O	O	O	O	O

V. Co-Op, Internship, or Practicum

	YES	NO	N/A
a. Did your major include a co-op internship, practicum, student teaching, or other field experience?	O	O	O
If you had a co-op position, please answer items b and c. Otherwise, skip to Section VI.			
b. Were the co-op coordinators effective in helping you secure co-op employment?	O	O	O
c. Did your co-op experience help you to find a job after graduation?	O	O	O

VI. FRESHMAN EXPERIENCE

If you were involved in the Freshman Experience, please answer items a and b.
Otherwise, skip to Section VII.

a. Did this program facilitate an easier transition to Georgia Tech?	O	O	O
b. Were the mentors helpful in answering your questions and concerns?	O	O	O

VIII. How well did Georgia Tech meet your needs in the following four areas?	**Very Well**	**Adequately**	**Somewhat Adequately**	**Poorly**
a. Career Training	O	O	O	O
b. Preparation for Graduate Study	O	O	O	O
c. Intellectual Growth	O	O	O	O
d. Personal Growth	O	O	O	O

	YES	NO	UNSURE
Would you recommend your program of study to a friend or a relative?……..	O	O	O

	YES	NO	UNSURE
Would you recommend Georgia Tech to a friend or a relative? ……	O	O	O

Please list up to three major strengths of Georgia Tech.	Please list up to three areas for improvement of Georgia Tech.

Please continue to the next section for questions specific to your program of study.

School of Civil Engineering: Undergraduate Exit Survey

Your name: _____Your program: _____

Your student ID number: | | | | | | | | |

Expected semester of graduation: O Fall O Spring O Summer 20____

KNOWLEDGE & SKILLS

To what extent do you think your Civil Engineering education contributed to your development of the following knowledge and skills?

	VERY MUCH	SOME WHAT	VERY LITTLE	NOT AT ALL	DON'T KNOW
Ability to understand the environmental impact of civil engineering solutions	O	O	O	O	O
Ability to understand the societal impact of civil engineering solutions	O	O	O	O	O
Ability to identify civil engineering problems	O	O	O	O	O
Ability to formulate alternatives to civil engineering problems	O	O	O	O	O
Ability to apply knowledge of mathematics to solve civil engineering problems	O	O	O	O	O
Ability to apply knowledge of the sciences to solve civil engineering problems	O	O	O	O	O
Ability to apply knowledge of core engineering topics to solve civil engineering problems	O	O	O	O	O
Ability to apply modern engineering tools to solve civil engineering problems	O	O	O	O	O
Ability to apply fundamental techniques and skills necessary to solve complex civil engineering problems	O	O	O	O	O
Ability to synthesize information to solve engineering problems	O	O	O	O	O
Ability to design and conduct experiments related to civil engineering disciplines	O	O	O	O	O
Ability to analyze and interpret data from designed experiments	O	O	O	O	O
Understanding of the role of computers in engineering	O	O	O	O	O
Understanding of professional responsibility	O	O	O	O	O

GENERAL PROGRAM

Please rate your level of satisfaction with the following areas:

	EXCELLENT	GOOD	FAIR	POOR	NO OPINION
Breadth of elective course offerings	O	O	O	O	O
Availability of elective offerings	O	O	O	O	O
Originality of material in core course subject areas	O	O	O	O	O
If you answered "Fair" or "Poor", which courses contained substantial overlap?					
Currency of course material?	O	O	O	O	O
If you answered "Fair" or "Poor", which courses were not current?					
To what extent do you think that the BSCE has prepared you for a career in engineering?	O	O	O	O	O
To what extent do you think your CE education prepared you for graduate school?	O	O	O	O	O
To what extent do you think your CE education prepared you to take the EIT exam?	O	O	O	O	O
What is your overall view of the CE faculty?	O	O	O	O	O
Which me professor(s) do you consider to be an especially effective teacher?					

Which me professor(s) do you consider to be an especially ineffective teacher?

Do you think the BSCE curriculum should be broad enough to prepare students to be productive in all CE specialties?

Yes	No	Unsure
O	O	O

Do you think the BSCE curriculum should have the flexibility to allow students deeper coverage in sub-disciplines (e.g. structures, environmental, etc.) while providing core-content in all CE specialties?

Yes	No	Unsure
O	O	O

What are the 3 greatest strengths of the CE program?	What are the 3 biggest weaknesses of the CE program?

Please provide any other comments regarding your CE education at Georgia Tech:

Thank you for taking the time to fill out this exit survey.

TABLE I-11. Summary of Civil Engineering

February 2002 Focus Group Summary

Nine juniors and seniors attended this focus group. Eight of the nine students were transfer students. The students were positive about the program and constructive with their observations. The students were first asked about the general expectations of the school, then asked in turn about the curriculum, advising, additional comments, and program choice.

Expectations of the School

1. More application and less theory –expectations are not met
2. More field trips and more direct interaction with the profession in the field (at least one trip per term where appropriate)- expectations not met, students are learning about material they have a hard time visualizing in some cases
3. Focus on learning- expectations generally met, but three students were concerned that their fellow students focused too much on grades
4. Access after 6:00 p.m. to the CEE computer labs-expectations are not met, students expressed frustration that they could not access specific software available in the labs after hours because the building is locked
5. Access to study areas in CEE after 6:00 p.m. for special projects-expectations not met
6. Teaching by faculty with PhD's- expectations exceeded
7. Quality faculty-expectations exceeded, quality to the students includes teaching and caring attitude
8. Interaction with faculty-expectations met and exceeded in some cases
9. Faculty with regular office hours-expectations generally met, with a few exceptions

Curriculum

1. Insure Systems class is offered to sophomores-too many juniors and seniors in the course who already know the material
2. Ethics class taught by Public Policy needs to focus more on engineering ethics or new course needs to be developed as an alternative
3. Introduction to CEE class freshman year-expectations not met, students felt it would help them focus on areas of interest and determine if CEE is really of interest
4. Focus more on technical and proposal writing
5. More information from faculty about their research programs and research/job opportunities
6. Formal preparation on how to work in groups for group project assignments
7. Interdisciplinary projects for seniors on real-world problems would be beneficial
8. Reduction in curriculum a concern –students want to be well-rounded and have a practical background to 9. CEE that includes surveying

Advising

Highly satisfied with staff and centralized approach
Centralized approach provides consistency and strong knowledge base
Staff encourage juniors and seniors to talk to faculty in their track

Choosing the Program

Students were asked if they had to choose the programs again, would they make the same choice? All nine studentsindicated they would make the same choice.

TABLE I-12. SAMPLE FLOWCHART

BSCE Catalog 2001-2003 Name: ***DOE,*** ***JOHN*** ***S.***
Last First Initial

First Semester at Tech: ***FALL 2000*** SSN: ***123-45-6789*** P.O. Box: ***333333*** E-mail: ***gt1234a***

(This is not an official record)

		CS 1321	**MATH 1501**	**CHEM 1310**	**HISTORY/GOV'T**	**ENGL 1101**
FRESHMAN		Computer Sci. I CS 1311 3 A	Calculus I **Minimum Grade C** 4 TC	General Chemistry I **Minimum Grade C** 4 TC	POL 1101 3 TC	English Comp. I 3 TC	17
	Spring Semester	**CEE 1770** Intro to Engineering Graphics & Visualization 3 B	**MATH 1502** Calculus II **Minimum Grade C** 4 TC	**PHYS 2211** Intro to Physics I **Minimum Grade C** 4 TC	HUMANITIES ELECTIVE PST 1101 3 TC	**ENGL 1102** English Comp. II 3 TC	17
SOPHOMORE	Fall Semester	**CEE 2010** Computational Modeling in CEE 3 A	**MATH 2401** Calculus III 4 TC	**PHYS 2212** Intro to Physics II 4 TC	CEE/ISYE/MATH 3770 Prob/Statistics 3	**ECON** ECON 2100 3 A	17
	Spring Semester	**CEE 2020** Statics/Dynamics **Minimum Grade C** 3 A	**MATH 2403** Differential Equations 4 A	**CEE 3000** Civil Engineering Systems 3 A	**BIOL 1510** Biol. Principles **Minimum Grade C** 4 A	Health Ed. Or Fitness HPS 1040 2 A	16
JUNIOR	Fall Semester	**CEE 3020** CE Materials 3 B	**CEE 3030** Strength of Materials 3 A	**CEE 3040** Fluid Mechanics 3 A	SOCIAL SCIENCE ELEC SOC 1101 3 TC	**EAS 2601** Earth Processes 4 A	16
	Spring Semester	*CEE BREADTH ELEC 3	*CEE BREADTH ELEC 3	**CEE 4200** Hydraulic Engineering 3	COE TECH. ELECTIVE MSE 3001, ME 3322, **OR** CHE 2110 3	**ETHICS** PST 3105, 3109, **OR** 3127 3	15

Fall Semester

SENIOR

	*CEE BREADTH ELEC 3	CEE TECHNICAL ELEC 3	CEE TECHNICAL ELEC 3	COE TECH. ELECTIVE ECE 3710/3741, MSE 2001 **OR** ECE 2025 3	APPROVED ELECTIVE MATH 2XXX 3 TC	15
Spring Semester	CEE TECHNICAL ELEC 3	**CEE 4090** CEE Capstone Design 3	APPROVED ELECTIVE CHEM 1XXX 3 TC	CEE TECH. ELECTIVE 3	SOCIAL SCIENCE ELEC 3000 or 4000 level 3	15

*Choose 3 of 5 from CEE 3055, CEE 4100, CEE 4300, CEE 4400 and CEE 4600

GRAND TOTAL: 128 hours

(PHOTO)

NOTES: CHEM 1XXX 1/TC, HPS 1XXX 2/TC, MATH 2XXX 3/TC, ISYE 3770 3/W,

ADVISOR: _____

TABLE I-4. FACULTY ANALYSIS

Figure 1. Relationships Among Data Elements of the CE Program Assessment Processes.