2015-2016 Annual Assessment Report Template

For instructions and guidelines visit our $\underline{\text{\bf website}}$ or $\underline{\text{\bf contact us}}$ for more help.

	Report: BS Civil Engineering
Qu	estion 1: Program Learning Outcomes
ass	L. th of the following Program Learning Outcomes (PLOs) and Sac State Baccalaureate Learning Goals (BLGs) did you ess? [Check all that apply]
✓	1. Critical Thinking
	2. Information Literacy
✓	3. Written Communication
✓	4. Oral Communication
✓	5. Quantitative Literacy
✓	6. Inquiry and Analysis
✓	7. Creative Thinking
	8. Reading
✓	9. Team Work
	10. Problem Solving
	11. Civic Knowledge and Engagement
	12. Intercultural Knowledge and Competency
✓	13. Ethical Reasoning
✓	14. Foundations and Skills for Lifelong Learning
	15. Global Learning
	16. Integrative and Applied Learning
	17. Overall Competencies for GE Knowledge
✓	18. Overall Competencies in the Major/Discipline
	19. Other, specify any assessed PLOs not included above:
а.	
o.	
€. [

01.2.

Please provide more detailed background information about **EACH PLO** you checked above and other information such as how your specific PLOs are **explicitly** linked to the Sac State BLGs:

The program's student learning outcomes are shown in below and are identical to ABET's student outcomes. These outcomes are available on the Department's website at http://www.ecs.csus.edu/ce/assessment.html.

Sacramento State Civil Engineering Student Learning Outcomes

- (a) An ability to apply knowledge of mathematics, science, and engineering
- (b) An ability to design and conduct experiments, as well as to analyze and interpret data
- (c) An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
- (d) An ability to function on multidisciplinary teams
- (e) An ability to identify, formulate, and solve engineering problems
- (f) An understanding of professional and ethical responsibility
- (g) An ability to communicate effectively
- (h) The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
- (i) A recognition of the need for, and an ability to engage in life-long learning
- (j) A knowledge of contemporary issues
- (k) An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.
 - "Critical thinking" is addressed in LO a, b, c, e and \boldsymbol{k}
 - "Written and oral communication" is addressed by LO g
 - "Quantitative literacy" is addressed in LO a, b, c, e and k "Inquiry and analysis" is addressed in LO a, b, c, e and k

 - "Creative thinking" is addressed in LO b, c, and e
 - "Ethical reasoning" is addressed in LO f
 - "Foundations and Skills for Lifelong Learning" is addressed in LO i
 - "Overall competencies in the Major/Discipline is addressed by all of the LOs

In connecting the Program's Learning Outcomes with the Sacramento State Baccalaureate Learning Goals:

- "Competencies in the Discipline" is addressed by all of the LOs
- "Knowledge of Human Cultures and the Physical and Natural World" is addressed by LO j and k
- "Intellectual and Practical Skills" is addressed by LO a, b, c, e, g and k
- "Personal and Social Responsibility" is addressed by LO h and j
- "Integrative Learning" is addressed by LO h, i and j

In comparing the Program's Learning Outcomes with the mission of Sacramento State:

"As California's capital university, we transform lives by preparing students for leadership, service, and success."

Our students graduate from the program prepared for a career as a civil engineer, arguably the most service-focused of all engineering majors considering the projects under the umbrella of civil engineering (bridges, dams, treatment facilities, roads, buildings, etc.).

In terms of leadership and success, many of our alumni rise to prominent leadership roles in local and state agencies, and in the private sector. Examples include:

- Steve Balbierz, PE Vice President, Wood Rodgers, Inc. (retired)
- Orin Bennett, PE President, Bennett Engineering Services
- Andre Boutros, PE Executive Director, California Transportation Commission (CTC)
- Bill Busath, PE Director of Utilities, City of Sacramento
- Pamela Creedon, PE Executive Officer, Central Valley Water Quality Control Board
- Tony Frayji, PE President, Frayji Design Group, Inc.
- Eddie Kho, PE, LEED AP President/CEO, Morton Pitalo, Inc.
- Rick Land, PE Chief Deputy Director, California Dept. of Transportation (Caltrans)
- Kathy Marks, PE Vice President, Carollo Engineers
- H. Kit Miyamoto, PE, SE President, Miyamoto International, Inc.
- Marco Palilla, PE, PMP Associate Vice President, HDR, Inc.
- Michael Penrose, PE Director, Sacramento Country Dept. of Transportation (SacDOT)
- Ruben Robles, PE Director of Operations, Sac. Regional County Sanitation District
- Mark Rodgers, PE Co-Founder/President, Wood Rodgers, Inc.
- Raphael Torres, PE Deputy Director, California Dept. of Water Resources (DWR)
- Ed Winkler, PE Vice President, CH2M Hill

01.2.1.

Do you have rubrics for your PLOs?

- 1. Yes, for all PLOs
- 2. Yes, but for some PLOs
- 3. No rubrics for PLOs
- 4. N/A
- 5. Other, specify:

Are your PLOs closely aligned with the mission of the university?

② 2. No
3. Don't know
Q1.4.
Is your program externally accredited (other than through WASC Senior College and University Commission (WSCUC))?
1. Yes
2. No (skip to Q1.5)
3. Don't know (skip to Q1.5)
01.4.1
Q1.4.1. If the answer to Q1.4 is yes , are your PLOs closely aligned with the mission/goals/outcomes of the accreditation agency?
1. Yes
2. No
3. Don't know
Q1.5. Did your program use the <i>Degree Qualification Profile</i> (DQP) to develop your PLO(s)?
1. Yes
2. No, but I know what the DQP is
3. No, I don't know what the DQP is
4. Don't know
4. Don't know
Q1.6.
Did you use action verbs to make each PLO measurable?
1. Yes
② 2. No
3. Don't know
(Remember: Save your progress)
Question 2: Standard of Performance for the Selected PLO
02.1.
Select ONE(1) PLO here as an example to illustrate how you conducted assessment (be sure you checked the correct box for
this PLO in Q1.1): Team Work
Ican work
Q2.1.1.
Please provide more background information about the specific PLO you've chosen in Q2.1.
A required course in our program is CE190 (Senior Project). Students are grouped into teams of 4 or 5 students to accompliahs a design of a civil engineering system. All students during the civil engineering senior design project are asked to evaluate the ability of their peers to function on multidisciplinary teams. On a scale of 1-3 where 1 = Not Met, 2 = Partially Met, and 3 = Met, students are asked to evaluate their peers in the following three skills:
 Communicate effectively with team members Fulfill their roles and duties by completing tasks on time Foster a constructive team climate
These three questions were then mapped to a rubric that was created for this LO.
Q2.2. Has the program developed or adopted explicit standards of performance for this PLO?
1. Yes
② 2. No
3. Don't know
○ 4. N/A

Q2.3.

Please **provide the rubric(s)** and **standards of performance** that you have developed for this PLO here or in the appendix.

See atta	ched		
ο			
	orichorTe 75 KB	eamwork.pdf	No file attached
Q2.4. PLO		lRubric	lease indicate where you have published the PLO , the standard of performance, and the ubric that was used to measure the PLO:
•			. In SOME course syllabi/assignments in the program that address the PLO
		_ 2	. In ALL course syllabi/assignments in the program that address the PLO
		3	. In the student handbook/advising handbook
		_ 4	. In the university catalogue
•		5	. On the academic unit website or in newsletters
•		6	. In the assessment or program review reports, plans, resources, or activities
		7.	. In new course proposal forms in the department/college/university
		8	. In the department/college/university's strategic plans and other planning documents
		9	. In the department/college/university's budget plans and other resource allocation documents
		1	0. Other, specify:
Quest Select			Collection Methods and Evaluation of Data Quality for the
23.1.	.cu ri	LU	
	ssment	data/eviden	ce collected for the selected PLO?

- 1. Yes
- 2. No (skip to **Q6**)
- 3. Don't know (skip to **Q6**)
- 4. N/A (skip to Q6)

Q3.1.1.

How many assessment tools/methods/measures in total did you use to assess this PLO?

Q3.2.

Was the data **scored/evaluated** for this PLO?

- 1. Yes
- 2. No (skip to **Q6**)
- 3. Don't know (skip to **Q6**)
- 4. N/A (skip to **Q6**)

Q3.2.1.

Please describe how you collected the assessment data for the selected PLO. For example, in what course(s) or by what means were data collected:

CE190 (Senior Project) through a student survey at the end of the semester.	
(Remember: Save your progress) Question 3A: Direct Measures (key assignments, projects, portfolios, etc.)	
 Q3.3. Were direct measures (key assignments, projects, portfolios, course work, student tests, etc.) used to assess this PLO? 1. Yes 2. No (skip to Q3.7) 3. Don't know (skip to Q3.7) 	
Q3.3.1. Which of the following direct measures were used? [Check all that apply] 1. Capstone project (e.g. theses, senior theses), courses, or experiences 2. Key assignments from required classes in the program 3. Key assignments from elective classes 4. Classroom based performance assessment such as simulations, comprehensive exams, or critiques 5. External performance assessments such as internships or other community-based projects 6. E-Portfolios	
7. Other Portfolios 8. Other, specify: specific assignment: survey Q3.3.2. Please explain and attach the direct measure you used to collect data:	
In the attached document is a sample survey that is distributed to each student in the senior project class. Each student "grades" every other student in the group relative to their performance as a team member in the group.	
CE 190TeamSurvey.docx 15.6 KB No file attached No file attached No rubric is used to evaluate the data? 1. No rubric is used to interpret the evidence (skip to Q3.4.4.) 2. Used rubric developed/modified by the faculty who teaches the class (skip to Q3.4.2.) 3. Used rubric developed/modified by a group of faculty (skip to Q3.4.2.) 4. Used rubric pilot-tested and refined by a group of faculty (skip to Q3.4.2.) 5. The VALUE rubric(s) (skip to Q3.4.2.) 6. Modified VALUE rubric(s) (skip to Q3.4.2.)	

Q3.4.1.
If you used other means, which of the following measures was used? [Check all that apply]

	1.	National disciplinary exams or state/professional licensure exams (skip to Q3.4.4.)	
	2.	General knowledge and skills measures (e.g. CLA, ETS PP, etc.) (skip to Q3.4.4.)	
	3.	Other standardized knowledge and skill exams (e.g. ETC, GRE, etc.) (skip to Q3.4.4.)	
	4.	Other, specify:	(skip to Q3.4.4.)
Q3.	4.2	•	
		e rubric aligned directly and explicitly with the PLO?	
•		Yes	
		No Death language	
		Don't know	
	4.	N/A	
Q3. 4	4.3	. e direct measure (e.g. assignment, thesis, etc.) aligned directly and explicitly with the rubric	?
		Yes	•
		No	
		Don't know	
		N/A	
Q3.		. e direct measure (e.g. assignment, thesis, etc.) aligned directly and explicitly with the PLO?	
vvas		Yes	
		No	
		Don't know	
		N/A	
	٦.		
Q3.			
How 4	ma	any faculty members participated in planning the assessment data collection of the selected PLC)?
4			
Q3.	5.1		2
HOW	ma	any faculty members participated in the evaluation of the assessment data for the selected PLO	·
1			
_			
Q3. ! If th	ie d	lata was evaluated by multiple scorers, was there a norming process (a procedure to make sure ϵ	everyone was scoring
		Yes	
0		No	
		Don't know	
0		N/A	

Q3.6. How did you **select** the sample of student work (papers, projects, portfolios, etc.)?

Every student in the graduating class of the fall semester participated. So, sampling was not employed.
Q3.6.1.
How did you decide how many samples of student work to review?
Q3.6.2.
How many students were in the class or program? 55
Q3.6.3. How many samples of student work did you evaluated?
55
Q3.6.4.
Was the sample size of student work for the direct measure adequate? 1. Yes
② 2. No
3. Don't know
(Remember: Save your progress)
Question 3B: Indirect Measures (surveys, focus groups, interviews, etc.)
Q3.7.
Were indirect measures used to assess the PLO? 1. Yes
2. No (skip to Q3.8)
3. Don't Know (skip to Q3.8)
Q3.7.1.
Which of the following indirect measures were used? [Check all that apply]
1. National student surveys (e.g. NSSE)
2. University conducted student surveys (e.g. OIR)
3. College/department/program student surveys or focus groups 4. Alumni surveys, focus groups, or interviews
5. Employer surveys, focus groups, or interviews
6. Advisory board surveys, focus groups, or interviews

7. Other, specify:	
Q3.7.1.1. Please explain and atta	ach the indirect measure you used to collect data:
of students reported th	ole of 29 students (54% of the Spring 2015 senior class) was assessed. Seventy-nine percent (79% leir "ability to function on a multi-disciplinary team" as exceptional or more than adequate; ninety-f students ranked their ability as exceptional, more than adequate, or adequate.
alumni reported that the	ey: A sample of 493 students (22% of graduates) was assessed. Eighty-seven percent (87%) of neir major (Civil Engineering) helped them with "participating and contributing positively to a team' sufficiently; ninety-three percent (93%) reported that the major had helped them considerably, nat.
No file attached	№ No file attached
Q3.7.2. If surveys were used, I	now was the sample size decided ?
All seniors and alumni	
	how did you select your sample:
Q3.7.4. If surveys were used, v See Q3.7.1.1.	what was the response rate?
Question 3C: C standardized to	Other Measures (external benchmarking, licensing exams, ests, etc.)
Q3.8. Were external benchma 1. Yes 2. No (skip to Q3 3. Don't Know (skip)	,
1. National discipl	measures was used? [Check all that apply] inary exams or state/professional licensure exams edge and skills measures (e.g. CLA, ETS PP, etc.)

3. Other standardize	ed knowledge and skill exams (e.g. ETC, GRE, etc.)	
4. Other, specify:		
Q3.8.2. Were other measures use 1. Yes 2. No (skip to Q4.1)		
3. Don't know (skip	to Q4.1)	
Q3.8.3. If other measures were u	ised, please specify:	
No file attached	No file attached	
(Remember: Save you	progress)	
Question 4: Dat	a, Findings, and Conclusions	
	oles and/or graphs to summarize the assessment data, findings, and conclusions for the se	lected PLO
for Q2.1 :		
See attached summarizi	ng direct and independent measures. Scores are normalized with respect to the maximum red line is placed at 75%.	
See attached summarizi		
See attached summarizi		
See attached summarizing for each measure, and a LO(d)Results.docx 20.17 KB Q4.2. Are students doing well a	No file attached Indicate the program standard? If not, how will the program work to improve student	
See attached summarizing for each measure, and a LO(d)Results.docx 20.17 KB	No file attached Ind meeting the program standard? If not, how will the program work to improve student ted PLO?	
LO(d)Results.docx 20.17 KB Q4.2. Are students doing well a performance of the selection of	No file attached No file attached Ind meeting the program standard? If not, how will the program work to improve student ted PLO? Theets target. Itime in core civil engineering courses to assist students, focusing particularly on performance.	score in
LO(d)Results.docx 20.17 KB Q4.2. Are students doing well a performance of the selection of	No file attached No file attached Ind meeting the program standard? If not, how will the program work to improve student ted PLO? The east target.	score in
LO(d)Results.docx 20.17 KB Q4.2. Are students doing well a performance of the selection of	No file attached No file attached Ind meeting the program standard? If not, how will the program work to improve student ted PLO? The ets target. Itime in core civil engineering courses to assist students, focusing particularly on performantes effectively with team members.	score in
LO(d)Results.docx 20.17 KB Q4.2. Are students doing well a performance of the selection of	No file attached No file attached Ind meeting the program standard? If not, how will the program work to improve student ted PLO? The ets target. Itime in core civil engineering courses to assist students, focusing particularly on performantes effectively with team members.	score in

1. **Exceeded** expectation/standard

3. Partially met expectation/standard 4. Did not meet expectation/standard 5. No expectation/standard has been specified 6. Don't know					
Question 4A: Alignment and Quality					
Q4.4. Did the data, including the direct measures, from all the differer PLO? 1. Yes 2. No 3. Don't know	nt assessmer	nt tools/mea	sures/meth	ods directly	align with the
 Q4.5. Were all the assessment tools/measures/methods that were use 1. Yes 2. No 3. Don't know 	d good meas	sures of the	PLO?		
Question 5: Use of Assessment Data (Clo	sing the	e Loop)			
As a result of the assessment effort and based on prior feedback program (e.g. course structure, course content, or modification of the second	as a result es. assist stude	of your asse nts, focusing	ssment of t	his PLO. Incl	lude a
Q5.1.2. Do you have a plan to assess the <i>impact of the changes</i> that you 1. Yes 2. No 3. Don't know	u anticipate	making?			
Q5.2. How have the assessment data from the last annual assessment been used so far? [Check all that apply]	1. Very Much	2. Quite a Bit	3. Some	4. Not at All	5. N/A
1. Improving specific courses					
2. Modifying curriculum					

3. Improving advising and mentoring

4. Revising learning outcomes/goals	0	0	•	0	0
5. Revising rubrics and/or expectations	0	•	0	0	0
6. Developing/updating assessment plan	0	•	0	0	0
7. Annual assessment reports	•	0	0	0	0
8. Program review	•	0	0		0
9. Prospective student and family information	0	0	0	•	0
10. Alumni communication	0	0	0	•	0
11. WSCUC accreditation (regional accreditation)	0	•	0		0
12. Program accreditation	•				
13. External accountability reporting requirement	•				
14. Trustee/Governing Board deliberations				•	
15. Strategic planning					
16. Institutional benchmarking					
17. Academic policy development or modifications					
18. Institutional improvement					
19. Resource allocation and budgeting				•	0
20. New faculty hiring	0		0	•	0
21. Professional development for faculty and staff	0		0	•	0
22. Recruitment of new students					
(Remember: Save your progress)					
Additional Assessment Activities					
Q6. Many academic units have collected assessment data on aspe					
impacts of an advising center, etc.). If your program/acaden report your results here:					•

☐ 1. Cr	l Thinking	
2. I	mation Literacy	
3. V	en Communication	
4. C	Communication	
5. C	titative Literacy	
6. I	ry and Analysis	
7. 0	ive Thinking	
8. R	ng	
9. T	Work	
10.	lem Solving	
✓ 11.	C Knowledge and Engagement	
12.	rcultural Knowledge and Competency	
13.	cal Reasoning	
14.	ndations and Skills for Lifelong Learning	
15.	pal Learning	
<u> </u>	grative and Applied Learning	
17.	rall Competencies for GE Knowledge	
18.	rall Competencies in the Major/Discipline	
	er, specify any PLOs not included above:	
a		
o		
c		
28.1.		
lave you	ached any files to this form? If yes, please list every attached file here:	
LO(d)res	docx	
CE190Te	urvey.docx	
RubricFo	mwork.pdf	
rogra	Information (Required)	
P1. Program/	centration Name(s): [by degree]	
BS Civil		
D1 4		
P1.1. Program/	centration Name(s): [by department]	
Civil Eng		
P2.		
Report A	r(s):	
Ben Fell		
P2.1.		
P2.1. Departmo Ben Fell	Chair/Program Director:	

Assessment Coordinator:	
None	
P3.	
Department/Division/Program of Academic Unit Civil Engineering	
CIVII Engineering	
P4.	
College:	
College of Engineering and Computer Science	
P5. Total enrollment for Academic Unit during assessment semester (see Departmental Fact Book):	
678	
P6.	
Program Type:	
1. Undergraduate baccalaureate major	
2. Credential	
○ 3. Master's Degree	
4. Doctorate (Ph.D./Ed.D./Ed.S./D.P.T./etc.)	
5. Other, specify:	
P7. Number of undergraduate degree programs the academic unit has?	
1	
D7.1 List all the pages.	
P7.1. List all the names:	
Bachelor of Science in Civil Engineering	
P7.2. How many concentrations appear on the diploma for this undergraduate program?	
0	
P8. Number of master's degree programs the academic unit has?	
1	
P8.1. List all the names:	
Master of Science in Civil Engineering	
P8.2. How many concentrations appear on the diploma for this master's program?	

P9. Number of credential programs to	he academic unit	has?					
P9.1. List all the names:							
P10. Number of doctorate degree pro	ograms the acad	emic unit h	as?				
When was your assessment plan	1. Before 2010-11	2. 2011-12	3. 2012-13	4. 2013-14	5. 2014-15	6. No Plan	7. Don't know
P11. developed?							
P11.1. last updated?							
P11.3. Please attach your latest assessment AssessmentPlan.docx 60.69 KB	plan:						
P12. Has your program developed a curricul 1. Yes 2. No 3. Don't know	lum map?						
P12.1. Please attach your latest curriculum m PLOCurriculumMapping.docx 86.22 KB	nap:						
P13. Has your program indicated in the curric 1. Yes 2. No 3. Don't know	culum map where	assessmer	t of studer	nt learning	occurs?		

Does	your program ha	ve a capstone class?
	1. Yes, indicate:	CE190: Senior project
	2. No	
	3. Don't know	
P14.	1.	
Does	your program ha	ve any capstone project?
	1. Yes	
	2. No	

(Remember: Save your progress)

3. Don't know

Performance Indicator	4 - Exemplary (Outstanding)	3.5	3 - Satisfactory (Proficient)	2.5	2 - Developing (Apprentice)	1.5	1 - Unsatisfactory (Novice)
Performance Indicator: Communicate effectively with team members	Ensures effective communication with all team members in all situations, attends all the required meetings, coordinates activities amongst group members and helps proactively to resolve conflicts between team members if required.		Ensures effective communication with all team members, attends all the meetings, coordinates activities between the group members to some extent.		Communicates with the team members often but unavailable at times to coordinate activities, misses some of the team meetings.		Keeps in touch with the group but misses tea meetings, does not communicate effectively to ensure smooth working of the group activities, becomes a hindrance to effective working of the group.
Performance Indicator: Fulfill their roles and duties by completing tasks on time	Completes all assigned tasks by deadline; work accomplished is thorough, comprehensive, and advances the project. Proactively helps other team members complete their assigned tasks to a similar level of excellence.		Completes all assigned tasks by deadline; work accomplished is thorough, comprehensive, and advances the project.		Completes all assigned tasks by deadline; work accomplished advances the project.		Completes all assigned tasks by deadline.
Performance Indicator: Fosters Constructive Team Climate	Consistently does at all of the team building techniques listed below.		Consistently does three of the team building techniques listed below.		Consistently does two of the team building techniques listed below.		Consistently does one of the team building techniques listed below.

CE 190 Senior Design Project Department of Civil Engineering California State University, Sacramento Team Name XXXXX

Team Member Name:

John Doe

Fall 2015

Teammate Evaluation - Team Member Criteria

C Criteria	Met Partially Met Not Met	Justification	Alignment with ABET rubric for Learning Outcome d (**this column added for assessment report to show alignment**)
Attends all scheduled group & group/client meetings	Met	"XXXX"	
2. Produces a fair share of final product	Met	"XXXX"	= "Fulfill their roles and duties by completing tasks on time"
3. Works cooperatively with others	Met	"XXXX"	= "Communicate effectively with team members"
Participate in setting appropriate goals & schedules	Met	"XXXX"	
B Criteria			
Independently contributes creativity to final products	Met	"XXXX"	= "Foster constructive team climate"
A Criteria			
Makes a significant, independent & creative contribution to final products above portion of the work that is individually responsibility	Met	"XXXX"	

Learning Outcome (d) Results "An ability to function on multi-disciplinary teams"

Measurement tool 1: Direct measure from student assignment (peer evaluation)

- Indicator 1: Communicates effectively with team members
- Indicator 2: Fulfills their roles and duties by completing tasks on time
- Indicator 3: Fosters constructive team climate

Indicator 1 – 73%; Indicator 2 – 75%; Indicator 3 – 78%; Overall – 75%

<u>Measurement tool 2</u>: (Indirect) Senior Survey <u>Measurement tool 3</u>: (Indirect) Alumni Survey

Overall (averaged) results from all measurement tools:



**Red line placed at 75% average score

	YEAR 1			YEA	R 2	YEA	AR 3	YEA	AR 4	YEA	\R 5	YEAR	8 6
ABET Outcomes	F-15	S-16		F-16	S-17	F-17	S-18	F-18	S-19	F-19	S-20	F-20	S-21
a, c, j												Self- Study Report	
												due July 1, 2019	
b, e, f													
b ,f, k													
a, e													
c, e, k													
c, d, g, i													



Assessment Activity	AY 15/16	AY 16/17	AY 17/18	AY 18/19	AY 19/20
Graduating Senior Survey	X	X	X	X	X
Exit Interview of Graduating Seniors	X	X	X	X	X
Sampling Students' Work at Course Level	X	X	X	X	X
Senior Projects Reports and Presentations	X	X	X	X	X
Sampling Student Work at Program Level	X	X	X	X	X
FE/EIT Results Evaluation*	X	X	X	X	X
Writing Assessment	X	X	X	X	X
Alumni Survey					X

		Low	er Divi	sion		Upper Division																		
ABET Learning Outcome	CE1	CE4	CE9	E30	E45	E110	E112	E115	E124	E132	E140	CE100	CE101	CE113	CE135	CE137	CE146	CE147	CE161	CE170	CE171A	CE190	Design Elective	Overall
(a)		D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	-	M	M	D	D	M	M	M
(b)	-		I	-	D	D	-	I	-	I	-	I	I	M	M	D @	ī.	D		D	D	M	M	M
(c)		-	•	I	-	-	I	-	D	¥	-	-		-	D	D	A	D	-	D	D	M	M	M
(d)		8	I	3	I	D	7	a.	-	(4	-	I	1.	D	-	K	D \		ā	2	-	M	-	M
(e)	,		I	I	I	D	D	I	D	D	I	I	D	D	D	D	I	M	M	M	M	M	M	M
(f)	I			I	I	D		-	D	•	-	I	9.00	I			M	I	01	D	D	D	-	M
(g)	I	-	I	I	I	-	97	-	-	-	-	I	I	D /	D	-7	D	M	I	D	D	M	-	M
(h)	I	-	127	-	-	120	I	I		-	D	D	- ,		-	D	D	D	I	D	D	M	-	M
(i)	-	-		I	I	I	I	-	D	-	-	I	I	ø)- '	I	I	I	D	:*	I	D	M	M
(j)	I	-	I	I	-	-		I				D	1	I	/ -	-	D	D	D	D	D	M	:=\	M
(k)	I	I	I	I	D	-	I	I	D	D	-	D	D	P	M	I	-	M	D	M	D	M	M	M

I = Introduced, D = Developed and Practiced with feedback, M = Demonstrated as Mastery level appropriate for graduation