

### Assessment Plan by Learning Outcome

Student Learning Outcome	AY 15- 16	AY 16- 17	AY 17- 18	AY 18- 19	AY 19- 20	AY 20- 21
(a) An ability to apply knowledge of mathematics, science, and engineering	A	E	C	A	E	C
(b) An ability to design and conduct experiments, as well as to analyze and interpret data		A	E	C	A	E
(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			A	E	C	A
(d) An ability to function on multidisciplinary teams	A	E	C	A	E	C
(e) An ability to identify, formulate, and solve engineering problems		A	E	C	A	E
(f) An understanding of professional and ethical responsibility			A	E	C	A
(g) An ability to communicate effectively	A	E	C	A	E	C
(h) The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context		A	E	C	A	E
(i) A recognition of the need for, and an ability to engage in life-long learning			A	E	C	A
(j) A knowledge of contemporary issues	A	E	C	A	E	C
(k) An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.		A	E	C	A	E

Key: A = Assess, E = Evaluate, C = Change (if necessary)

**Table 1. Courses Contributing to Student Learning Outcomes**

	Lower Division					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	-	D	-	D	D	M	M	M
(c)	-	-	-	I	-	-	I	-	D	-	-	-	-	-	D	D	-	D	-	D	D	M	M	M
(d)	-	-	I	-	I	D	-	-	-	-	-	I	-	D	-	-	D	I	-	-	-	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	-	I	-	-	M	I	-	D	D	D	-	M
(g)	I	-	I	I	I	-	-	-	-	-	-	I	I	D	D	-	D	M	I	D	D	M	-	M
(h)	I	-	-	-	-	-	I	I	-	-	D	D	-	I	-	D	D	D	I	D	D	M	-	M
(i)	-	-	-	I	I	I	I	-	D	-	-	I	I	D	-	I	I	I	D	-	I	D	M	M
(j)	I	-	I	I	-	-	-	I	-	-	-	D	I	I	-	-	D	D	D	D	D	M	-	M
(k)	I	I	I	I	D	-	I	I	D	D	-	D	D	D	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

#### ABET Student Learning Outcomes

- An ability to apply knowledge of mathematics, science, and engineering
- An ability to design and conduct experiments, as well as to analyze and interpret data
- 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
- An ability to function on multidisciplinary teams
- An ability to identify, formulate, and solve engineering problems
- An understanding of professional and ethical responsibility
- An ability to communicate effectively
- The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
- A recognition of the need for, and an ability to engage in life-long learning
- A knowledge of contemporary issues
- An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.