

ABET "Outcomes"

Engineering programs must demonstrate that their graduates have:

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 multi-disciplinary 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.

Revision 10/14/2009

Mappings between ABET Outcomes and M&AE courses

ABET outcome	Courses
a	Engr 1000, Math 1910, 1920, 2930, 2940, advanced math course, Chem 2070 or 2080, Phys 1112, 2213, 2214, T&AM 2020, 2030, ECE 2100, 2120, 2210, 2250, 3230, 3240, 3250, 3260, 3270, 3780*, 4272, 4280, 4900, 4291, advanced math course, computer applications course, technical elective, approved electives (2), upper level M&AE electives (3), senior design elective
b	M&AE 3260, 3270, 3780*, 4780, 4272, senior design elective

c	M&AE 1170*, 2120, 2250, 4280, 4900, 4291, senior design elective
d	M&AE 2210, 2250, 4250&4260 (FSAE*), 4272, 4400&4410 (HEV*), 4291 group design projects, 5250 (Robocup*)
e	M&AE 2250, 3250, 4280, 4900, 4291, senior design elective
f	M&AE 2250, 4280, senior design elective, humanities/social science courses
g	Freshmen writing seminars, humanities/social science courses, M&AE 2250, 4270, 4900, 4291
h	M&AE 4280, humanities/social science courses
i	M&AE 4280, technical elective, upper level M&AE electives (3), senior design elective
j	M&AE 4280, humanities/social science courses
k	M&AE 2250, 3270, 3780, advanced math course, technical elective, upper level M&AE electives, senior design elective

* denotes courses not taken by all students

* denotes courses not taken by all students

Mappings between M&AE courses and ABET Outcomes

Courses	ABET outcome
Engr 1000, Math 1910, 1920, 2930, 2940, advanced math course, Chem 2070 or 2080, Phys 1112, 2213, 2214, T&AM 2020, 2030, ECE 2100, M&AE 2120, 3230, 3240, approved electives (2)	a
M&AE 2120	a,c
M&AE 2250	a,c,d,e,f,g,k
M&AE 3250	a,e
M&AE 3260	a,b
M&AE 3270	a,b,k
M&AE 3780*	a,b,k
M&AE 4272	a,b,d,g
M&AE 4280	a,c,e,f,h,i,j
M&AE 4780	a,b,k
Senior design elective	a,b,c,e,f,i,k
M&AE 4900, 4291	a,c,e,g
M&AE 2210, 4291 group design projects	a,d
Computer applications course, advanced math course	a,k
Technical elective, upper level M&AE electives (3)	a,i,k
M&AE 1170*	c

M&AE 4250&4260 (FSAE*), 4400&4410 (HEV*), 5250 (Robocup*)	d
Humanities/social science courses	f,g,h,j
Freshmen writing seminars	g