# Approved <u>Technical Electives</u> - Mechanical Engineering Undergraduate Major

ACCT*	All 3000 and higher
ACCI	except 3840, 4840/5840
	or 4870/5870
AER E	All 3000 and higher
ALIV L	except: 3010, 3100, 3310,
	4660. (4940 only with ME
	, ,
A B E	dept approval.)
ABE	All 3000 and higher
A F.C.I	except 3750, 3780 and 4660
A ECL	All 3000 and higher
AFAS	3410, 3420, 4410, 4420
AGEDS	3880
AGRON	All 3000 and higher
	except 4460
AN S	All 3000 and higher
	except 3170, 4970
ARCH	All 3000 and higher
	except 3210, 4200, 4220,
	4230, 4240, 4250, 4260,
	4270, 4290, 4310, 4370, 4820
	4860
ASTRO	All 3000 and higher
BBMB	All 3000 and higher
BCBIO	All 3000 and higher
BIOL	All 3000 and higher
	except 3070, 3940.
	(BIOL 4880 can be taken
	for TE only if taken
	with 4860; 3930 only if
	taken with 3930A or B,
	or 3940.)
ВМЕ	BME 2200; all 3000 and
	higher
B M S	All 3000 and higher
CH E	All 3000 and higher
	(Only one of 4260 or 4270
	can apply to BSME
	degree.)
CHEM	All 3000 and higher
CE	All 3000 and higher
	except 4030
COM S	All 3000 and higher
CON E	All 3000 and higher
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CPR E	2870, all 3000 and
	higher except 3940, 4660
CYB E	3310, 4410
DS	3010, 3030, 4010 (May not
	use DS/LS 2010.)
DSN S	5460 (3 credits max)
ECON	All 3000 and higher
ΕE	All 3000 and higher
	except 4420, 4480
EEOB	All courses
EDADM	All courses
E M	All 3000 and higher
	except 3240
ENGR	All 3000 and higher
	except 3200, 3270, 3750
ENT	All 3000 and higher
	except 3740 and 3740L
ENTSP	3130 (ENTSP 3100 counts
	only if ENTSP 3130 is also
	taken)
ENSCI	All 3000 and higher
ENV S	All 3000 and higher
FIN*	All 3000 and higher
FS HN	All 3000 and higher
	except 3400, 3650,
	3670, 4030, 4080, 4420,
	4630, 4660
GEOL	All 3000 and higher
HORT	All 3000 and higher
IA LL	All 3000 and higher
ΙE	All 3000 and higher
	except 4490, 4660, 5490
IND D	3200, 3300, 3500, 4350,
	5300, 5500
KIN	3550, 3720, 4550, 4720,
	4800, 4810
MAT E	All 3000 and higher
	except 3910, 3920
MGMT*	All 3000 and higher
MIS*	All 3000 and higher
MKT*	All 3000 and higher
MATH	Math 2070; all 3000 and
INCIL	higher except 3970, 4970
L	Inglief except 3370, 4370

M E	ME 2800; All 3000
IVI E	
	higher EXCEPT ME Core
	courses (ME 3240,
	3240L, 3250, 3320, 3350,
	3450, 3700, 4150, 4210,
	4360, 4420, 4660)
	3960, 3980, 4980
	(Students taking more
	than one capstone
	design class (4150, 4420,
	4660) may apply the
	second or third class
	taken to their technical
	electives. Both ME 4010
	and 4020 must be taken
	to earn TE credit.)
MICRO	All 3000 and higher
	except 3740 and 3740L
M S	3010L, 3020, 3020L, 4010L,
	4020L
MSE	All courses
MTEOR	All 3000 and higher
	except 3210, 3980, 4170,
	4990
MUSIC	3460, 4460
NREM	All 3000 and higher
	except 3050
N S	3200, 3300, 4100, 4120
PHYS	All 3000 and higher
	except 3020, 3890, 3980,
	3990
PL P	All 3000 and higher
SCM*	All 3000 and higher
SE	All 3000 and higher
STAT	All 3000 and higher
	except 3050, 3220, 3260,
	3300(Only one of Stat 301
	or 4010 can apply to the
	BSME degree.)
TSM	All 3000 and higher
	except 3370, 3930
WESEP	5020

<sup>\*</sup>The College of Business does NOT allow non-business students to take more than three of 3000+ level courses in their college (ACCT, FIN, MGMT, MIS, MKT, SCM, ENTSP). Please note that this is across the *college*, not the individual course designator.

### **Criteria for Technical Electives**

Technical electives provide an opportunity for students to explore a range of advanced technical subjects (engineering, mathematics and the natural sciences) or relevant engineering professional skills topics (e.g. design, business, management, marketing) to provide increased breadth or to focus on a specific technical area to develop in-depth understanding. This generally implies a course that

- \* Is designated at the 3000 level or higher, including graduate level courses.
- \* Utilizes skills developed in introductory and intermediate technical courses (basic program and ME engineering math, science requirements) or covers topics to enhance students' knowledge of professional skills related to the engineering profession.

## **BSME Technical Elective Course Requirements**

- \* The BSME requires at least 15 credits of technical electives (on top of a capstone design elective).
- \* Any Independent Study course (490, AER E 494/494x, or other) must go through a departmental approval process prior to being applied as a technical elective. "All courses" as noted on the reverse does not automatically include 490, AER E 494, or other independent study classes in the listed departments see your advisor for details.
  - No more than 6 total credits of independent study (ME 490, non-ME 490
     Aer E 4940/4940X, or other independent study) will be applied to the BSME degree, and no single independent study experience may exceed 3 credits
- \* Any courses involving travel must show specific learning outcomes and assessment plan prior to approval.
- \* Internship and cooperative education courses in any department (including ME) are not applicable as technical electives.
- \* Departmental prerequisites are not waived simply because a course is on this list. Students must complete the prerequisites or obtain prior professor approval to waive the prerequisites.
- \* Some listed courses may be restricted to majors only and may not be available to ME students.
- \* A 200 level prerequisite course may be applied as a technical elective if taken prior to the final course and credit is earned in the final course.

## **US Diversity / International Perspectives Technical Electives**

Courses in **BOLD** are ones typically taken by M E Students

US Diversity: For complete list of courses see www.registrar.iastate.edu/courses/USDiversity-current.html

#### **International Perspectives:**

A B E 3880 ENSCI 4060

A ECL 4550 ENV S 3420, 3450, 3840

AFAS 4420 M E 4840
AGRON 4060 MGMT 3670
AN S 4410 MICRO 3600X
ARCH 3220 MTEOR 4060
C E 3880, 3950 NREM 4710

E E 3510, 3880

ECON 3200, 3350, 3550, 3700, 3850, 3870, 4550, 4570