## Minimum M.S. Program Requirements\*

	Plan A (Thesis)	Plan B (Non-thesis)
ME 600-level Graduate Courses (excluding ME 699, ME 700 and ME 691; C or better)	12 credits	18 credits
ME 600-level Graduate and/or ME 400-level Technical Electives (C or better)	9	9
Thesis - ME 700 (thesis topic and title to be approved by student's Thesis Committee)	8	
Directed Reading - ME 699		2
Seminars - ME 691	1	1
<b>Minimum Total Credits</b>	30	30
Final examination	Oral thesis defense	Written and/or oral exam (at discretion of student's Project Committee)
Required course during semester degree is to be awarded	ME 700	ME 699

University of Hawaii at Manoa – Five-Year Academic Plan

### Integrated Bachelor of Science and Master of Science: Plan A

The program of courses listed below satisfies the ABET accreditation criteria of 32 credits of mathematics and basic sciences, 48 credits of engineering sciences and engineering design. Any deviations must be approved by the student's advisor, department chair, and dean. The University General Education Core and graduation requirements for Engineering are included. ME (or equivalent CEE) courses may be taken no more than three times.

Freshman		Sophomore		Junior		Senior		MS	
Fall	Credits	Fall	Credits	Fall	Credits	Fall	Credits	Fall	Credits
Eng 100 (FW)	3	CEE 270	3	ME 311 (GATEWAY)	4	ME 422	4	ME 600+	3
Math 241 (FS)	4	Math 243	3	ME 331	3	ME 481	4	ME 600+	3
Chem 161 (DP)	3	Phys 272 (DP)	3	ME 360	3	Phys 274	3	ME 691	1
Chem 161L (DY)	1	Phys 272L (DY)	1	ME 371 or CEE 370	3	ME 434 or ME 446 <sup>†</sup>	3		
FG	3	EE 211	4	ME 374	3	ME 626 or ME 671 <sup>†</sup>	3		
		ME 213	3						
Fall Total	14	Fall Total	17	Fall Total	16	Fall Total	17	Fall Total	7
Spring	Credits	Spring	Credits	Spring	Credits	Spring	Credits	Spring	
Math 242	4	CEE 271 or ME 271	3	ME 322	4	ME 482	3	ME 600+	3
Phys 170 (DP)	4	Math 244	3	ME 341	4	ME 626 or ME 671 <sup>†</sup>	3	ME 600+ or elective	3
Phys 170L (DY)	1	Econ 120, 130 or 131 (DS)	3	ME 372	3	DH or DL	3	ME 700 thesis	8
Chem 162 (DP)	3	Math 302 or Math 307	3	ME 375	4	DS	3		
EE 160	4	COMG 251 (DA)	3						
		FG	3						
Spring Total	16	Spring Total	18	Spring Total	15	Spring Total	12	Spring Total	14
Accumulated Total	30		65		96		125		155

<sup>†</sup>Courses to be double counted

#### **Notes:**

- Please refer to General Education Core Requirements in UH Manoa Catalog for Diversification (DH, DL, DS) and FG Foundation Courses.
- MATH 251/252/253 may be substituted for MATH 241/242/243/244.
- Chem 181/181L or Chem 171/171L may be substituted for Chem 161/161L and Chem 162 above.
- Writing Intensive (W) required 5 courses (minimum of 2 in upper division). ME 322, ME 342, ME 375, ME 422 and ME 481 satisfy the W-focus requirement.
- One course each required for Hawaiian, Asian & Pacific Issues (H), Oral Communication (O) and Contemporary Ethical Issues (E). Some of these may be met with ME 481 (E) and ME 482 (O).
- A grade of 'C' or better is required in ME 311 prior to registration in ME 322.
- Phys 305 or Math 407 may be substituted for ME 360.
- EE 110 or ICS 111 may be substituted for EE 160.
- Courses to be double-counted are the following: ME 434 or ME 446 in the first semester of the Senior year, ME 600+ in the first semester of the Senior year and ME 600+ in the second semester of the Senior year. Courses to be double-counted may only be taken in the senior year after admission to the MS program.
- Application to the BAM-ME should be submitted in the Spring semester of the Junior Year. Admission to the BAM-ME program occurs at the Fall semester of the Senior Year.
- The total number of credits of the BAM-ME is 155, of which nine credits are double-counted.

# University of Hawaii at Manoa – Five-Year Academic Plan Integrated Bachelor of Science and Master of Science: Plan B

The program of courses listed below satisfies the ABET accreditation criteria of 32 credits of mathematics and basic sciences, 48 credits of engineering sciences and engineering design. Any deviations must be approved by the student's advisor, department chair, and dean. The University General Education Core and graduation requirements for Engineering are included. ME (or equivalent CEE) courses may be taken no more than three times.

Freshman		Sophomore		Junior		Senior		MS	
Fall	Credits	Fall	Credits	Fall	Credits	Fall	Credits	Fall	Credits
Eng 100 (FW)	3	CEE 270	3	ME 311 (GATEWAY)	4	ME 422	4	ME 600+	3
Math 241 (FS)	4	Math 243	3	ME 331	3	ME 481	4	ME 600+	3
Chem 161 (DP)	3	Phys 272 (DP)	3	ME 360	3	Phys 274	3	ME 600+	3
Chem 161L (DY)	1	Phys 272L (DY)	1	ME 371 or CEE 370	3	ME 434 or ME 446 <sup>†</sup>	3	ME 691	1
FG	3	EE 211	4	ME 374	3	ME 626 or ME 671 <sup>†</sup>	3		
		ME 213	3						
Fall Total	14	Fall Total	17	Fall Total	16	Fall Total	17	Fall Total	10
Spring	Credits	Spring	Credits	Spring	Credits	Spring	Credits	Spring	
Math 242	4	CEE 271 or ME 271	3	ME 322	4	ME 482	3	ME 600+	3
Phys 170 (DP)	4	Math 244	3	ME 341	4	ME 626 or ME 671 <sup>†</sup>	3	ME 600+ or elective	3
Phys 170L (DY)	1	Econ 120, 130 or 131 (DS)	3	ME 372	3	DH or DL	3	ME 600+	3
Chem 162 (DP)	3	Math 302 or Math 307	3	ME 375	4	DS	3	ME 699	2
EE 160	4	COMG 251 (DA)	3						
		FG	3						
Spring Total	16	Spring Total	18	Spring Total	15	Spring Total	12	Spring Total	11
Accumulated Total	30		65		96		125		155

<sup>†</sup>Courses to be double counted

#### **Notes:**

- Please refer to General Education Core Requirements in UH Manoa Catalog for Diversification (DH, DL, DS) and FG Foundation Courses.
- MATH 251/252/253 may be substituted for MATH 241/242/243/244.
- Chem 181/181L or Chem 171/171L may be substituted for Chem 161/161L and Chem 162 above.
- Writing Intensive (W) required 5 courses (minimum of 2 in upper division). ME 322, ME 342, ME 375, ME 422 and ME 481 satisfy the W-focus requirement.
- One course each required for Hawaiian, Asian & Pacific Issues (H), Oral Communication (O) and Contemporary Ethical Issues (E). Some of these may be met with ME 481 (E) and ME 482 (O).
- A grade of 'C' or better is required in ME 311 prior to registration in ME 322.
- Phys 305 or Math 407 may be substituted for ME 360.
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- Courses to be double-counted are the following: ME 434 or ME 446 in the first semester of the Senior year, ME 600+ in the first semester of the Senior year and ME 600+ in the second semester of the Senior year. Courses to be double-counted may only be taken in the senior year after admission to the MS program.
- Application to the BAM-ME should be submitted in the Spring semester of the Junior Year. Admission to the BAM-ME program occurs at the Fall semester of the Senior Year.
- The total number of credits of the BAM-ME is 155, of which nine credits are double-counted.