

# Academic Requirements Worksheet: Mechanical Engineering (ME)

Effective Fall 2018 Catalog and Beyond

To help you complete your degree in a timely manner and not take more units than absolutely necessary, there are ways to use single courses to meet more than one requirement (overlap). There is no way to list all possible overlaps, so please complete this form with a professional advisor. We can help you identify the best course of action.

<b>Graduation Requirements</b>	<b>√</b>
<i>Items with * require C- or better</i>	
<b>Total Unit Requirements:</b>	
# Total units required for a ME BS	<b>122 units</b>
# Total major-related units	<b>92 units</b>
# Total units outside of major	<b>30 units</b>
<b>American Institutions:</b>	
# US History:	<i>Recommend HIST 17A or HIST 17B</i>
# US Constitution:	<i>Recommend POLS 1</i>
# CA State & Local Government:	<i>Recommend POLS 1</i>
Race & Ethnicity in American Society (R+E): _____	
<b>English Composition &amp; GWAR:</b>	
1. Written Communication: ENGL 5(M) or 10/11(M)*	
2. Second Semester Composition: ENGL 20(M)*	
3. Writing Portfolio, WPJ Exam, or ENGL 109W(M)	
4. Writing Intensive (WI) Course*: _____	
Foreign Language (FL)	<b>EXEMPT</b>
<b>**GR/GE may change if you change your major**</b>	

<b>Next Semester Course Option</b>	<b>(Units)</b>
1. _____	( )
2. _____	( )
3. _____	( )
4. _____	( )
5. _____	( )
6. _____	( )
<b>Total Units: _____</b>	
<b>To Do:</b>	
_____	
_____	
_____	

<b>General Education for Engineering</b> <i>Items with * require C- or better</i>				
Area A: Basic Subjects (6 units)	Suggestion or Requirement	Course	Semester	Grade
A1. Oral Communication*	COMS 4 or COMS 5			
A2. Written Communication*	ENGL 5(M) or ENGL 11(M)			
Area B: Physical Universe & Its Life Forms (12 units)				
B1. Physical Science & B3. Lab*	Met by major: PHYS 11A/CHEM 1E			
B2. Life Forms	<i>Recommend: ENV5 10</i>			
B4. Quantitative Reasoning*	Met by major: MATH 30			
B5. Upper Division GE*	Met by major: ME 190			
Area C: Arts & Humanities (12 units)				
C1. Arts				
C2. Humanities				
Second Semester Composition*	ENGL 20(M)			
Any Area C Upper Division Course*	<i>Recommend: Writing Intensive</i>			
Area D: The Individual & Society (12 units)				
U.S. History	<i>Recommend: HIST 17A or HIST 17B</i>			
U.S. Constit., CA State, & Local Govt	<i>Recommend: POLS 1</i>			
Any Area D Course				
Upper Division Area D Major Course*	Met by major: ME 108 & ME 191			
Area E: Understanding Personal Development (3 units)				
3 units of Area E Major Courses*	Met by major: ENGR 6			

# Mechanical Engineering Course Check List

Fall 2020-Spring 2021 Catalog

**\*\*Disclaimer\*\***

The below list is not to be used to plan out your courses. It is only used as a check list to reflect your progress within your program. For course planning assistance, please speak with an academic advisor or faculty member to assist you.

All the courses on this list must be passed with a C- or better.

## Lower Division Requirements

Code	Title	Pre-req	Units	<input checked="" type="checkbox"/>
CHEM 1E	General Chemistry for Engineering	Chemistry Diagnostic Exam & MATH 30 eligibility	4	
ENGR 6	Engineering Graphics & CADD		3	
ENGR 17	Introductory Circuit Analysis	PHYS 11C & MATH 45. One may be taken concurrently	3	
ENGR 30	Analytic Mechanics: Statics	MATH 31 & PHYS 11A	3	
ENGR 45	Engineering Materials	MATH 30 & CHEM 1E (concurrently)	3	
MATH 30	Calculus I	ALESK PPL: Score of 76 or MATH 29 or AP Credit	4	
MATH 31	Calculus II	MATH 30	4	
MATH 32	Calculus III	MATH 32	4	
MATH 45	Differential Equations	MATH 31	3	
ME 37	Manufacturing Processes		3	
PHYS 11A	Mechanics	MATH 30 & MATH 31 (concurrently)	4	
PHYS 11C	Electricity and Magnetism	PHYS 11A & MATH 31	4	

## Upper Division Requirements

ENGR 110	Analytic Mechanics – Dynamics	ENGR 30, MATH 45, & Math 32	3	
ENGR 112	Mechanics Of Materials	ENGR 30, ENGR 45, Math 45, & ENGR 6 (concurrently)	3	
ENGR 124	Thermodynamics	CHEM 1E, PHYS 11A, & MATH 32	3	
ME 76	Programming & Problem Solving in Engr	MATH 30, PHYS 11A (concurrently)	2	
ME 106	Applications of Programming	ME 76	1	
ME 108	Professional Topics for Mech Engr	MATH 31 (concurrently)	2	
ME 116	Machinery Design I	ENGR 112 & ME 37 (concurrently)	2	
ME 117	Machinery Design II	ME 116	2	
ME 120	Fluid Mechanics	ENGR 110 (concurrently)	3	
ME 126	Heat Transfer	ME 120 & ENGR 124	3	
ME 128	Thermal-Fluid Systems	ME 126 (concurrently)	3	
ME 138	Product & Process Design	ME 37 & ME 116	3	
ME 171	Modeling & Simulation of Mechatronics & Control Systems	ENGR 110 & ME 76	3	
ME 172	Control System Design	ME 171	3	
ME 180	Mechanical properties of Materials	ENGR 112	3	
ME 190	Project Engineering I	ME 117	3	
ME 191	Project Engineering II	ME 190	2	

## Major Electives

ME Elective	Required total 6 units for electives	Please see a Faculty Advisor	1-6	
ME Elective	Required total 6 units for electives	Please see a Faculty Advisor	1-6	
			Total Units: 92	

## Any Questions?

Please visit the ECS Student Success Center – Advising, Counseling, and Tutoring Center in Santa Clara 1213  
Or the Mechanical Engineering Department in Riverside 4024

Hub for online student resources including major roadmaps, catalogs, Academic Advising Worksheets, Placement exams, and online resources: <https://www.csus.edu/college/engineering-computer-science/student-success/student-resources.html>