



**California State Polytechnic University, Pomona
Degree Curriculum Sheet**

Plan (Major) **MECHANICAL ENGINEERING**

Catalog Year **2015 - 2016**

Name _____

Subplan/Option _____

Minimum Units Required **194**

Student ID _____

Required Core Courses		
Course		Units
Required of all students. A 2.0 cumulative GPA is required in core courses in order to receive a degree in the major.		
Mechanical Engineering Orientation Lab	ME 100L	1
Vector Statics	ME 214	3
Vector Dynamics	ME 215	4
Strength of Materials I	ME 218	3
Strength of Materials II	ME 219	3
Strength of Materials Lab	ME 220L	1
Mechanics Lab	ME 224L	1
Engineering Digital Computations	ME 232	2
Engineering Digital Computations Activity	ME 232A	1
Intro to Mechanical Design & Lab	ME 233/233L	3/1
Thermodynamics I	ME 301	4
Thermodynamics II	ME 302	4
Fluid Mechanics I	ME 311	3
Fluid Mechanics II	ME 312	3
Fluid Mechanics Lab	ME 313L	1
Engineering Materials	ME 315	4
Intermediate Dynamics	ME 316	3
Stress Analysis	ME 319	4
Machine Design & Lab	ME 325/325L	3/1
Engineering Numerical Computations Activity	ME 330A	1
Modeling and Simulation of Dynamic Systems	ME 340	3
Engineering Materials and Selection Lab	ME 350L	1
Finite Element Analysis & Activity	ME 406/406A	3/1
Heat Transfer	ME 415	4
Air Conditioning & Lab	ME 418/418L	3/1
or Thermal Systems Design	ME 427	(4)
Theory and Design for Mech Measurement & Lab	ME 435/435L	3/1
Control of Mechanical Systems & Lab	ME 439/439L	3/1
Analytic Geometry and Calculus II	MAT 115	4
Analytic Geometry and Calculus III	MAT 116	4
Calculus of Several Variables I	MAT 214	3
Calculus of Several Variables II	MAT 215	3
Elem Linear Algebra and Diff Equations	MAT 224	4
General Physics & Lab	PHY 133/133L	3/1
Total Units		100

Required Emphasis Courses	
Course	Units
The Mechanical Engineering program requires each student to select technical elective courses in one of the two technical emphases to meet the graduation requirement: Mechanical Design and Energy Systems. Each Mechanical Engineering student is required to specify three courses out of one of the two emphases as listed below. No other courses from any other department or university will be accepted as substitutes for these courses. The courses included in the two required technical emphasis courses pool are as follows: (see reverse side)	12
Total	12

Required Support Courses		
Course		Units
The following required support courses should be taken to satisfy the indicated GE Requirements to achieve the minimum units to degree listed at the top of this sheet.		
Students may receive senior project credit by taking EGR 481 and EGR 482, provided they satisfy all prerequisite requirements for senior project and get approval from the department by completing the department senior project form. For senior project prerequisites, please refer to prerequisites for ME 461 and ME 462.		
General Chemistry & Lab (B1, B3)	CHM 121/121L	3/1
Principles of Economics (D2)	EC 201	4
or Principles of Economics (D2)	EC 202	(4)
Elements of Electrical Engineering & Lab	ECE 231/231L	3/1
Engineering, Society, and You & Lab (E)	EGR 100/100L	3/1
Project Design Principles and Applications (B5)	EGR 481	2
and Project Design Principles and Applications (B5)	EGR 482	2
Ethical Considerations in Tech and Applied Sci (C4)	IME 402	4
Asset Allocation in Tech Decision Making (D4)	IME 403	4
Analytic Geometry and Calculus I (B4)	MAT 114	4
Engineering Graphics I & Lab	MFE 126/126L	2/1
Manufacturing Systems Processes & Lab	MFE 201/201L	3/1
General Physics & Lab (B3)	PHY 131/131L	3/1
Total Units		43

General Education Requirements		IGE (G.E. Alternative)
Area	Units	
Area A Communication & Critical Thinking	12	
1. Oral Communication		IGE 120 4
2. Written Communication		IGE 121 4
3. Critical Thinking		IGE 122 4
Area B Mathematics & Natural Sciences	16	
<i>Select at least one lab course from subarea 1 or 2.</i>		
1. Physical Science		IGE 220 4
2. Biological Science		IGE 221 4
3. Laboratory Activity		IGE 222 4
4. Math/Quantitative Reasoning		IGE 223 4
5. Science & Technology Synthesis		IGE 224 4
Area C Humanities	16	
1. Visual and Performing Arts		AREA A1 4
2. Philosophy and Civilization		AREA A3 4
3. Literature and Foreign Language		AREA B 16
4. Humanities Synthesis		AREA C1, C2 or C3 4
Area D Social Sciences	20	
1. U.S. History, Constitution, American Ideals		AREA C4 4
a. United States History		
b. Introduction to American Government		
2. History, Economics and Political Science		
3. Sociology, Anthropology, Ethnic & Gender Studies		
4. Social Science Synthesis		
Area E Lifelong Understanding & Self Development	4	
Total	68	

American Institutions	Units
Courses that satisfy this requirement may also satisfy GE Area D1	8

American Cultural Perspectives Requirement	Units
Refer to catalog for list of courses that satisfy this requirement. Course may also satisfy major, minor, GE, or unrestricted elective requirements.	4

All persons who receive undergraduate degrees from Cal Poly Pomona must pass the Graduation Writing Test (GWT). The test must be taken by the quarter following completion of 120 units for undergraduates.