California State Polytechnic University, Pomona
Degree Curriculum Sheet

Plan (Major) **MECHANICAL ENGINEERING** Catalog Year **2009-2010** Name _____ Evaluator _____
Subplan/Option _____ Minimum Units Required **198** Student ID _____ GWT Satisfied _____Yes ____No

Required Core Courses

Course		Units
*Students in this major are expected to **maintain** a GPA of at least 2.00 in all core courses.*		
Mechanical Engineering Orientation	ME 100L	1
Vector Statics	ME 214	3
Mechanics Lab	ME 224L	1
Vector Dynamics	ME 215	4
Strength Materials	ME 218	3
Strength Materials	ME 219	3
Strength Materials Lab	ME 220L	1
Engineering Digital Computations	ME 232/232A	2/1
Introduction to Mechanical Design	ME 233/233L	3/1
Thermodynamics	ME 301	4
Thermodynamics	ME 302	4
Fluid Mechanics	ME 311	3
Fluid Mechanics	ME 312	3
Fluid Mechanics	ME 313L	1
Engineering Materials	ME 315	4
Intermediate Vector Dynamics	ME 316	3
Stress Analysis	ME 319	4
Machine Design	ME 325/L	4
Modeling of Systems	ME 340	3
Materials Science & Selection Lab	ME 350L	1
Finite Element Analysis	ME 406/406A	3/1
Heat Transfer	ME 415	4
Air Conditioning	ME 418/418L	4
or Thermal Systems Design	ME 427	(4)
Theory & Design for Mech. Measurement	ME 435/435L	3/1
Control of Mechanical Systems	ME 439/439L	3/1
Analytic Geometry/Calculus II	MAT 115	4
Analytic Geometry/Calculus III	MAT 116	4
Calculus of Several Variables I	MAT 214	3
Calculus of Several Variables II	MAT 215	3
Linear Algebra & Differential Equations	MAT 224	4
General Physics	PHY 131/131L	3/1
General Physics	PHY 133/133L	3/1
	Total Units	**103**

Elective Core Courses

Course	Units
Technical Electives Select from department's list with advisor's approval.	13
Total Units	**13**

Required Support Courses

Course		Units
Analytic Geometry/Calculus I (B4)	MAT 114	4
General Chemistry/Lab (B1, B3)	CHM 121/121L	3/1
General Chemistry II	CHM 122	3
General Chemistry II Lab (B3)	CHM 122L	1
Project Design Principles and Application (B5)	EGR 481, 482	4
Ethical Considerations in Technology and Applied Science (C4)	EGR 402	4
Principles of Economics (D2)	EC 201 or 202	4
Elements of Electrical Engineering/Lab	ECE 231/231L	3/1
Asset Allocation in Technical Decision Making (D4)	EGR 403	4
Engineering Graphics I/Lab	MFE 126/126L	2/1
Manufacturing & Systems Processes/ Lab	MFE 201/201L	3/1
	Total Units	**39**

General Education Requirements

Area		Units	IGE (G.E. Alternative)	
Area A	**Communication & Critical Thinking**	**12**	IGE 120	4
1	Oral Communication		IGE 121	4
2	Written Communication		IGE 122	4
3	Critical Thinking		IGE 220	4
Area B	**Mathematics & Natural Sciences**	**16**	IGE 221	4
Select at least one lab course from sub-area 1 or 2.			IGE 222	4
1	Physical Science		IGE 223	4
2	Biological Science		IGE 224	4
3	Laboratory Activity		Area A2	4
4	Math/Quantitative Reasoning		Area A3	4
5	Science & Technology Synthesis		Area B	16
Area C	**Humanities**	**16**	Area C1, C2 or C3	4
1	Visual and Performing Arts		Area C4	4
2	Philosophy and Civilization		Area D4	4
3	Literature and Foreign Language			
4	Humanities Synthesis			
Area D	**Social Sciences**	**20**	See University Catalog for information on how IGE meets G.E. require-ments.	
1	U.S. History, Constitution, American Ideals			
2	History, Economics and Political Science			
3	Sociology, Anthropology, Ethnic & Gender Studies			
4	Social Science Synthesis			
Area E	**Lifelong Understanding & Self Development**	**4**		
	Total Units	**68**		

American Institutions — 8
Courses that satisfy this requirement may also satisfy G.E. Area D1

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

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.

Course		GE Area
General Chemistry/Lab	CHM 121/121L	B1, B3
and General Chemistry II Lab	CHM 122L	B3
Analytic Geometry/Calculus I	MAT 114	B4
Project Design Principles & Application I	EGR 481, 482	B5
Ethical Considerations in Tech. & Applied Sci	EGR 402	C4
Principles of Economics	EC 201 or 202	D2
Asset Allocation in Tech Decision Making	EGR 403	D4

The remaining GE requirements may be satisfied by any course approved for that area.

No more than 105 community college quarter units or 36 extension credit quarter units may be applied toward a Bachelor's degree.
A minimum 2.0 cumulative GPA is required in core (including option) courses, Cal Poly Pomona courses, and overall work completed in order to receive a degree in this major.

CALIFORNIA STATE POLYTECHNIC UNIVERSITY, POMONA
MECHANICAL ENGINEERING DEPARTMENT

2009 – 2010

COURSE
P: Prerequisite
C: Corequisite

	FRESHMAN			SOPHOMORE			JUNIOR			SENIOR		
	FALL	WINTER	SPRING	FALL	WINTER	SPRING	FALL	WINTER	SPRING	FALL	WINTER	SPRING
SUPPORT	MFE 126/L ENGR GRAPHICS I 2/1		MFE 201/L MFG SYS & PROC 3/1				ECE 231/L ELEM ELEC ENGR 3/1; P: PHY 133					
CORE	CHM 122/L General CHEMISTRY 3/1			MAT 214 CALC of SEV VAR 3	MAT 215 CALC of SEV VAR 3	MAT 224 LIN ALGEBRA & DIFF EQS 4	ME 311 FLUID MECHANICS I 3	ME 311 FLUID MECHANICS II 3				
	MAT 115 AN GEOM & CALCULUS 4		MAT 116 AN GEOM & CALCULUS 4							ME 415 HEAT TRANSFER 4	ME 418 or 427 THERMAL DESIGN 4; P: ME 302, 312 & ME 415	APPROVED TECHNICAL ELECTIVE * 3
					PHY 133/L General PHYSICS 3/1		ME 301 THERMO I 4	ME 302 THERMO II 4	ME 313L FLUIDS LAB 1; P: GWT≥6 & ME 231; C: ME 312			
	ME 100L * ME ORIENT 1	ME 232/A ENGR DIGIT COMP 2/1; C: MAT 114	PHY 131/L General PHYSICS 3/1; C: MAT 115			ME 215 VECTOR DYNAMICS 4	ME 316 Intermediate DYNAMICS 3		ME 340 DYNAMIC MODELING 3	ME 439/L CONTROL of MECH SYS 3/1	APPROVED TECHNICAL ELECTIVE * 3	APPROVED TECHNICAL ELECTIVE * 4
	CHM 121/L General CHEMISTRY 3/1; P: H.S. CHEM or CHM 103 & ALGEBRA							ME 315 ENGR MATERIALS 4; P: CHM 122	ME 350L MAT. SCIENCE & SELECTION LAB 1; P: GWT≥6 & ME 231		ME 435/L ADV ENGR MEASURE 3/1	
				ME 214 / 224L VECTOR STATICS 3/1; P: ENG 104	ME 218 STRENGTH of MATERIALS 3	ME 219 STRENGTH of MATERIALS 3						
	MAT 114 AN GEOM & CALCULUS 4; P: ELM & MAT 105, 106 or EQUIVALENT				ME 233/L INTRO MECH DES 3/1; P: MFE 126		ME 220L STR MATERIAL LAB 1; P: GWT≥6; C: ME 219	ME 319 STRESS ANALYSIS 4	ME 325/L MACHINE DESIGN 3/1; P: ME 233 & MFE201/210	APPROVED TECHNICAL ELECTIVE * 3	ME 406/A FINITE ELEMENTS 3/1	
		AREA A2 * 4		AREA B2 * 3		AREA A3 * 4						EGR 403 Asset Allocation 4
GE	AREA A1 * 4	AREA C1 * 4	AREA C2 * 4	AREA D1a * 4	AREA D1b * 4	AREA D3 * 4	ECON 201 <or> ECON 202 4	AREA E * 4	AREA C3 * 4	EGR 402 Ethical Considerations 4	EGR 481 Project Design Prin & Appl 2	EGR 482 Project Design Prin & Appl 2
IGE	IGE 120 Conscience & Communication 4	IGE 121 Rationalism & Revelation 4	IGE 122 Authority & Faith 4	IGE 220 Culture & Contact 4	IGE 221 Reform & Revolution 4	IGE 222 Industrial Age 4	IGE 223 Contemporary World 4	IGE 224 Connections Seminar 4				
UNITS	16	16	16	16	16	16	16	16	16	16	16	16

All horizontal connectors "flow" from left to right

{ CHOOSE **GE** or **IGE** OPTION }

TOTAL 198

* SEE LISTS OF APPROVED COURSES IN THIS AREAS

Revised: 2/10/09