

2015 Core Courses for Mechanical Engineering Program in LCOE at CSU, Fresno (Update 30 June 2015)	College of Sequoias	Fresno City College	Reedley College	West Hills College	Clovis Community College Center (Formerly known as: Willow International Center)	CSU, Fresno
Fundamentals Core						
ENL10 English Composition (3 semester units)	GE A2 Written Comm	ENGL 1 College Reading and Composition (4)	ENGL 1A Reading and Composition (4)	ENGL 1A Advanced Composition (4)	ENG 1A Composition and Reading	ENGL 1A Advanced Composition (4)
COMM 3, 7, 8 Oral Communication (3 semester units)	GE A1 Oral Com	COMM 1 Fundamentals of Public Speaking (3) or COMM 7 Persuasion (3) or COMM 8 Group Communication (3)	COMM 1 Introduction to Public Speaking (3) or COMM 4 Persuasion (3) or COMM 8 Group Communication (3)	COMM 1 Public Speaking (3) or COMM 4 Persuasion (3) or COMM 8 Group Communication (3)	COM 1 Elements of Public Speaking (3) or COM 4 Small Group Dynamics and Presentation (3)	COMM 1 Public Speaking (3) or COMM 4 Persuasion (3) or COMM 8 Group Communication (3)
MATH 75 Calculus 1 (4 semester units)	GE B4 Quant Reason	MATH 75 Calculus 1 (5)	MATH 5A Mathematical Analysis I (5)	MATH 5A Math Analysis I (5)	MATH 1A Introduction to Calculus (5)	MATH 5A Math Analysis I (5)
MATH 76 Calculus 2 (4 semester units)		MATH 76 Calculus 2 (4 semester units)	MATH 5B Mathematical Analysis II (4)	MATH 5B Math Analysis II (4)	MATH 1B Calculus with Applications (5)	MATH 5B Math Analysis II (4)
MATH 77 Calculus 3 (4 semester units)		MATH 77 Calculus 3 (5)	MATH 6 Mathematical Analysis III (4)	MATH 6 Math Analysis III (4)	MATH 2A Multivariate Calculus (4)	MATH 6 Math Analysis III (4)
MATH 81 Differential Equation (3 semester units)		MATH 81 Diff Eq (5)	MATH 7 Introduction to Differential Equations (4)	MATH 7 Differential Equations and Linear Algebra (4)	MATH 2B Differential Equations (4)	MATH 7 Differential Equations and Linear Algebra (4)
PHYS 4A Physics 1 Lecture (3 semester units)		PHYS 5 Physics for Sci & Eng (5) (3 Lect+1 Lab) & PHYS 6 Physics for Sci & Eng (5) (3 Lect+1 Lab) &	PHYS 4A Physics for Scientists and Engineers (4) (3 Lect+1 Lab)	PHYS 4A Physics for Scientists and Engineers (4) (3 Lect+1 Lab)	PHYSICS 4A Classical Mechanics (4) (3 Lect+1 Lab)	PHYS 4A Physics for Scientists and Engineers (4) (3 Lect+1 Lab)
PHY 4AL Physics 1 Laboratory (1 semester units)		PHYS 5 Physics for Sci & Eng (5) (3 Lect+1 Lab) & PHYS 6 Physics for Sci & Eng (5) (3 Lect+1 Lab) &	PHYS 4A Physics for Scientists and Engineers (4) (3 Lect+1 Lab)	PHYS 4A Physics for Scientists and Engineers (4) (3 Lect+1 Lab)	PHYSICS 4A Classical Mechanics (4) (3 Lect+1 Lab)	PHYS 4A Physics for Scientists and Engineers (4) (3 Lect+1 Lab)
PHY 4B Physics 2 Lecture (3 semester units)		PHYS 6 Physics for Sci & Eng (5) (3 Lect+1 Lab) & PHYS 7 Physics for Sci & Eng (5) (3 Lect+1 Lab) &	PHYS 4B Physics for Scientists and Engineers (4) (3 Lect+1 Lab) & PHYS 4C Physics for Scientists and Engineers (4) (3 Lect+1 Lab)	PHYS 4B Physics for Scientists and Engineers (4) (3 Lect+1 Lab)	PHYSICS 4B Electricity, Magnetism and Waves (4)	PHYS 4B Physics for Scientists and Engineers (4) (3 Lect+1 Lab)
PHY 4C Physics 3 (3 semester units)			PHYS 4B Physics for Scientists and Engineers (4) (3 Lect+1 Lab) & PHYS 4C Physics for Scientists and Engineers (4) (3 Lect+1 Lab)	PHYS 4C Physics for Scientists and Engineers (4) (3 Lect+1 Lab)	PHYSICS 4C Thermodynamics, Optics and Modern Physics (4)	PHYS 4C Physics for Scientists and Engineers (4) (3 Lect+1 Lab)
CHEM1A Chemistry 1 Lecture (3 semester units)	GE B1 Phys Science	CHEM 1Gen Chem (5)	CHEM 1A General Chemistry (5)	CHEM 1A General Chemistry (5)	CHEM 1A General Chemistry (5)	CHEM 1A General Chemistry (5)
Life Science Lecture (3 semester units)	GE B2 Life Science	BIOL 20 Frontiers in Biology (4)	BIOL 3 Introduction to Life Science (4)	BIOL 3 Introduction to Life Science (4)	BIO 15 Biology for Education (3)	BIOL 15 Introduction to Life Science (4)
PHIL 20 Moral Questions	GE C2 Humanities	PHIL 5 Ethics		PHIL 1C Ethics (3)	PHIL 3 Ethics (3)	PHIL 1C Ethics (3)
Engineering Core						
ME 01 Freshman Design 1 (1 semester units)		ENGR 110 Introduction to Engineering (1)	ENGR 10 Introduction to Engineering (2)	ENGR 1 The Engineering Profession (1) or ENGR 10 Introduction to Engineering (2)	ENGR 10 Introduction to Engineering (1)	ENGR 1 The Engineering Profession (1) or ENGR 10 Introduction to Engineering (2)
ME 02 Freshman Design 2 (1 semester units)		COMP 5 Computer Concepts (4)	CIT 15 Computer Concepts (3)	IS 15 Computer Concepts (3)	CIS 7 Computer Concepts (3)	IS 15 Computer Concepts (3)
ME 26 Introduction to Graphics (3 semester units)		ENGR 1 Engineering Graphics (3)	ENGR 2 Graphics (3)	ENGR 2 Engineering Graphics (4) (2 Lecture + 6 Lab)	ENGR 20 Engineering Graphics (3)	ENGR 2 Engineering Graphics (4) (2 Lecture + 6 Lab)
ME31 Intro to Materials (3 semester units)		ENGR 3 Engineering Materials (4) (3 Lect + 1 Lab)	ENGR 4 Engineering Materials (3)	ENGR 4 Engineering Materials (3)	ENGR 31 Engineering Materials (3)	ENGR 4 Engineering Materials (3)
ME32 Intro to Materials Lab (1 semester units)		ENGR 3 Engineering Materials (4) (3 Lect + 1 Lab)				
ME95 Manufacturing Processes (2 semester units)						
CE20 Statics (3 semester units)		ENGR 2 Statics (3)	ENGR 8 Statics (3)	ENGR 8 Statics (3)	ENGR 35 Vector Statics (3)	ENGR 8 Statics (3)
ECE91 Circuits Lecture (3 semester units)		ENGR 4 Electrical Circuits (4) (3 Lect + 1 Lab)	ENGR 6 Circuits with Lab (4) (3 Lec + 1 Lab)	ENGR 6 Electric Circuit Analysis with Lab (4) (3 Lect + 1 Lab)	ENGR 25 Electrical Circuits (3)	ENGR 6 Electric Circuit Analysis with Lab (4) (3 Lect + 1 Lab)
ECE91L Circuits Laboratory (1 semester units)		ENGR 4 Electrical Circuits (4) (3 Lect + 1 Lab)	ENGR 6 Circuits with Lab (4) (3 Lec + 1 Lab)	ENGR 6 Electric Circuit Analysis with Lab (4) (3 Lect + 1 Lab)		ENGR 6 Electric Circuit Analysis with Lab (4) (3 Lect + 1 Lab)
ECE71 Computer Programming (3 semester units)		CSCI 1 Programming Concepts and Methods 1 (4)	CIT 66 Beginning Programming C++ (4) or CSCI 40 Programming Concepts and Methodology I (4)	CSCI 40 Programming Concepts and Methodology I (4) or ENGR 40 Programming for Scientists and Engineers (4)	ENGR 15 Engineering Computations (3)	CSCI 40 Programming Concepts and Methodology I (4) or ENGR 40 Programming for Scientists and Engineers (4)
Mechanical Engineering Core						
ME 112 Eng Mech: Dynamics (3 semester units)						
ME 115 Instr and Measurements (1 semester units)						
ME 136 Thermodynamics (3 semester units)						
ME 125 Eng Statistics & Experiment (3 semester units)						MATH 107 Intro to Probability & Statistics (3)
CE 121 Eng Mech: Mech of Mat (3 semester units)						
ME 116 Fluid Mechanics (3 semester units)						
ME 118 Fluid Mechanics Lab (1 semester units)						
ME 134 Kinematics of Machinery (3 semester units)						
ME 140 Adv Eng Analysis (3 semester units)						
ME 145 Heat and Mass Transport (3 semester units)						
ME 156 Advanced Thermodynamics (3 semester units)						
ME 135 Intro to Design / Sr Capstone Design 1 (3 semester units)						
ME 166 Energy Systems Design (3 semester units)						
ME 155 Sr Capstone Design 2 (3 semester units)						

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