

2015 Core Courses for Mechanical Engineering Program in LCOE at CSU, Fresno (Updated 16 July 2015)		Clovis Community College Center (Formerly known as Willow International Center)	College of Sequoias	Fresno City College	Reedley College	West Hills College	CSU, Fresno
Fundamentals Core	Notes						
ENL10 English Composition (3 semester units)		GE A2 Written Comm	ENGL 1A Advanced Composition (4)	ENGL 1 College Reading and Composition (4)	ENGL 1A Reading and Composition (4)	ENGL 1A Advanced Composition (4)	ENG 1A Composition and Reading
COMM 3, 7, 8 Oral Communication (3 semester units)		GE A1 Oral Com	COMM 1 Public Speaking (3) or COMM 4 Persuasion (3) or COMM 8 Group Communication (3)	COMM 1 Fundamentals of Public Speaking (3) 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)
MATH 75 Calculus 1 (4 semester units)	C or better	GE B4 Quant Reason	MATH 5A Math Analysis I (5)	MATH 75 Calculus 1 (5)	MATH 5A Mathematical Analysis I (5)	MATH 5A Math Analysis I (5)	MATH 1A Introduction to Calculus (5)
MATH 76 Calculus 2 (4 semester units)	C or better		MATH 5B Math Analysis II (4)	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 77 Calculus 3 (4 semester units)	C or better		MATH 6 Math Analysis III (4)	MATH 77 Calculus 3 (5)	MATH 6 Mathematical Analysis III (4)	MATH 6 Math Analysis III (4)	MATH 2A Multivariate Calculus (4)
MATH 81 Differential Equation (3 semester units)	C or better		MATH 17 Differential Equations and Linear Algebra (5)	MATH 81 Diff Eq (5)	MATH 7 Introduction to Differential Equations (4)	MATH 17 Differential Equations and Linear Algebra (5)	MATH 2B Differential Equations (4)
PHYS 4A Physics 1 Lecture (3 semester units)	C or better		PHYS 4A Physics for Scientists and Engineers (4) (3 Lect+1 Lab)	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)
PHY 4AL Physics 1 Laboratory (1 semester units)	C or better		PHYS 4A Physics for Scientists and Engineers (4) (3 Lect+1 Lab)	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)
PHY 4B Physics 2 Lecture (3 semester units)	C or better		PHYS 4B Physics for Scientists and Engineers (4) (3 Lect+1 Lab)	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)
PHY 4C Physics 3 (3 semester units)			PHYS 4C Physics for Scientists and Engineers (4) (3 Lect+1 Lab)	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 4C Physics for Scientists and Engineers (4) (3 Lect+1 Lab)	PHYSICS 4C Thermodynamics, Optics and Modern Physics (4)
CHEM1A Chemistry 1 Lecture (3 semester units)		GE B1 Phys Science	CHEM 1A General Chemistry (5)	CHEM 1Gen Chem (5)	CHEM 1A General Chemistry (5)	CHEM 1A General Chemistry (5)	CHEM 1A General Chemistry I (5)
Life Science Lecture (3 semester units)		GE B2 Life Science	BIOL 3 Introduction to Life Science (4)	BIOL 20 Frontiers in Biology (4)	BIOL 3 Introduction to Life Science (4)	BIOL 3 Introduction to Life Science (4)	BIOL 15 Biology for Education (3)
PHIL 20 Moral Questions (3 semester units)		GE C2 Humanities	PHIL 1C Ethics (3)	PHIL 5 Ethics	PHIL 1C Ethics (3)	PHIL 1C Ethics (3)	PHIL 3 Ethics (3)
HIST 11 American History to 1877 or HIST12 American History from 1877 (3 semester units)		GE D1 Breadth/US History	HIST 11 History of the US to 1877 or HIST 12 History of the US from 1877	HIST 17 People of the US to 1877 or HIST 18 People of the US from 1877 (3)	HIST 11 History of the US to 1877 or HIST 12 History of the US from 1877	HIST 11 History of the US to 1877 or HIST 12 History of the US from 1877	HIST 17A History of the US 1492-1877 or HIST 17B History of the US 1865 to Present (3)
PLSI 2 American Government and Institutions (3 semester units)		GE D2 Breadth/US Government	POLSCI 2 American Government (3)	POLS 5 Federal, State and Local Government (3)	POLSCI 2 American Government (3)	POLSCI 2 American Government (3)	POL SCI 1 American Government (3)
ECON 40 Principles of Micro Econ or ECON50 Principles of Macro Econ (3 semester units)		GE D3 Breadth/Social Sciences	ECON 1B Microeconomics or ECON 1A Macroeconomics (3)	ECON 40 Principles of Micro Econ or ECON50 Principles of Macro Econ	ECON 40 Introduction to Microeconomics or ECON 50 Introduction to Macroeconomics (3)	ECON 1B Microeconomics or ECON 1A Macroeconomics (3)	ECON 1B Microeconomics or ECON 1A Macroeconomics (3)
Engineering Core	Notes						
ME 01 Freshman Design 1 (1 semester units)			ENGR 1 The Engineering Profession (1) or ENGR 10 Introduction to Engineering (2)	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)
ME 02 Computer Applications in ME (1 semester units)			IS 15 Computer Concepts (3)	COMP 5 Computer Concepts (4)	CIT 15 Computer Concepts (3)	IS 15 Computer Concepts (3)	CIS 7 Computer Concepts (3)
ME 26 Introduction to Graphics (3 semester units)			ENGR 2 Engineering Graphics (4) (2 Lecture + 6 Lab)	ENGR 1 Engineering Graphics (3)	ENGR 2 Graphics (3)	ENGR 2 Engineering Graphics (4) (2 Lecture + 6 Lab)	ENGR 20 Engineering Graphics (3)
ME31 Intro to Materials (3 semester units)			ENGR 4 Engineering Materials (3)	ENGR 3 Engineering Materials (4) (3 Lect + 1 Lab)	ENGR 4 Engineering Materials (3)	ENGR 4 Engineering Materials (3)	ENGR 31 Engineering Materials (3)
ME32 Intro to Materials Lab (1 semester units)			ENGR 3 Engineering Materials (4) (3 Lect + 1 Lab)			ENGR 4L Engineering Materials Lab (1)	
ME95 Manufacturing Processes (2 semester units)					ENGR 11 Manufacturing Processes (3)		
CE20 Statics (3 semester units)			ENGR 8 Statics (3)	ENGR 2 Statics (3)	ENGR 8 Statics (3)	ENGR 8 Statics (3)	ENGR 35 Vector Statics (3)
ECE91 Circuits Lecture (3 semester units)			ENGR 6 Electric Circuit Analysis with Lab (4) (3 Lect + 1 Lab)	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)
ECE91L Circuits Laboratory (1 semester units)			ENGR 6 Electric Circuit Analysis with Lab (4) (3 Lect + 1 Lab)	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)	
ECE71 Computer Programming (3 semester units)			CSCI 40 Programming Concepts and Methodology I (4) or ENGR 40 Programming for Scientists and Engineers (4)	CSCI 1 Programming Concepts and Methods I (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)
Mechanical Engineering Core	Notes						
ME 112 Eng Mech: Dynamics (3 semester units)	C or better						
ME 115 Instr and Measurements (1 semester units)							
ME 136 Thermodynamics (3 semester units)	C or better						
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)	C or better						
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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