

UNIT ALLOCATION 2008-09

ENGINEERING SCIENCE, DESIGN & EXPERIMENTATION UNITS

To obtain true unit count, check units on transcript: There can be no more Engineering Science and/or Design units than are taken in total for the course. Course units may vary from year to year; credit is given only for the number of units awarded on transcript.

	Computer Science (CS) Unit Allocation 2008-09	SCI	DES	EXP	Total
CS 106A	Programming Methodology	4	1	0	5
CS 106B	Programming Abstractions	4	1	0	5
CS 106X	Programming Methodology & Abstractions	4	1	0	5
CS 107	Programming Paradigms	2	3	0	5
CS 108	Object-oriented Systems Design	2	2	0	4
CS 140	Operating Systems & Systems Programming	3-4	0	0	3-4
CS 143	Compilers	2	1	0	3-4
CS 148	Introductory Computer Graphics	1	2	0	3
CS 193C	Client-Side Internet Technologies	1	1	0	3
CS 193D	C++ and Object-Oriented Program	1.5	1.5	0	3
CS 193E	MAC OSX Cocoa Programming	1.5	1.5	0	3
CS 194	Software Project	0	3	0	3
CS 244A	Introduction to Computer Networks	3	0	0	3
CS 248	Introduction to Computer Graphics	2	1	0	3-5
	EARTHSYS + GES + MSE + ENERGY	SCI	DES	EXP	Total
EARTHSYS 10	Introduction to Earth Systems	0	0	1	4
GES 1	Dynamic Earth: Fund of Earth Science	0	0	1	4
GES 4	Extinction of the Dinosaurs: An Intro to Study of Earth	0	0	1	4
MSE 152	Electronic Materials Engr	4	0	0	4
ENERGY 101	Energy & the Environment (EARTHSYS 101)	3	0	0	3
ENERGY 102	Renewable Energy Sources (EARTHSYS 102)				3
ENERGY 120	Fundamentals of Petroleum Engineering	2	1	0	3
	PHYSICS + STATS	SCI	DES	EXP	Total
Phys 22/24/26	Modern Physics Lab	0	0	1	1
Phys 44/46	Electr & Magnetism/ Heat & Light Lab	0	0	1	1

Phys 64	Advanced Freshman Physics Laboratory	0	0	1	1
Phys 66	Advanced Freshman Physics Laboratory	0	0	1	1
Stat 110	Stat Meth in Engr & the Physical Sci	3-4	1	0	4-5
Stat 116	Theory of Probability	3-5	0	0	3-5

	Chemical Engineering (ChE) Unit Allocation 2008-09	SCI	DES	EXP	Total
ChE 100	Chem Process Modeling, Dynamics & Control	3	0	0	3
ChE 110	Equilibrium Thermodynamics (03-04)	3	0	0	3
ChE 120	Separation Processes	2	1	0	3
ChE 120A	Fluid Mechanics	3	1	0	4
ChE 120B	Energy & Mass Transport	3	1	0	4
ChE 130	Separation Processes	2	1	0	3
ChE 140	Microelectronics Processing Technology	2	1	0	3
ChE 150	Biochemical Engineering	2	1	0	3
ChE 160	Polymer Science & Engineering	2	1	0	3
ChE 170	Kinetics and Reactor Design	2	1	0	3
ChE 174	Environmental Microbiology I	2	1	0	3
ChE 180	Chemical Engineering Plant Design	0	3	0	3
ChE 181	Biochemistry I	3	0	0	3
ChE 183	Biochemistry II	3	0	0	3
ChE 185A	Chemical Engineering Laboratory A (WIM)	2	2	4	4
ChE 185B	Chemical Engineering Laboratory B	2	2	4	4
Chem 036	Chemical Separations (95/96)	0	0	2	3
Chem 130	Theory and Practice of Identification	4	0	4	4
Chem 131	Organic Polyfunctional Analysis	0	0	3	5
Chem 151	Inorganic Chemistry I	3	0	0	3
Chem 171	Physical Chemistry –Chemical Thermodynamics	3	0	0	3
Chem 173	Physical Chemistry – Quantum Chemistry	3	0	0	3
Chem 175	Physical Chemistry -- Kinetic Theory & Statistical Mechanics	3	0	0	3

	CEE Courses Unit Allocation 2008-09	SCI	DES	EXP	Total
CEE 31Q	Accessing Architecture through Drawing	1	3	0	4
CEE 46Q	Fail Your Way to Success	2	1	0	3
CEE 48Q	Designing Orgs to Execute Global Projects	2	2	0	4
CEE 63	Weather & Storms	3	0	0	3
CEE 64	Air Pollution: Urban Smog to Global Change	3	0	0	3
CEE 70	Environmental Science & Technology	2	1	0	3
CEE 80N	The Art if Structural Engineering	2	2	0	4
CEE 100	Managing Sustainable Building Projects	2.5	1.5	1	4
CE 101A	Mechanics of Materials	3	1	1	4
CE 101B	Mechanics of Fluids	3	1	0	4
CE 101C	Geotechnical Engineering	3	1	1	4
CE 101D	Computations in CEE	2	1	0	3
CE 102	Legal Context of Civil Engineering	2	1	0	3
CE 110	Building Information Modeling	2	1	1	4
CEE 111	Multidisciplinary Modeling & Analysis	1	2	1	4
CEE 115	Goals & Methods for Sustainable Bldg Projects	2	1	0	3
CE 122A	Computer-Generated Arch/ENGR/Construction	0	1	0	3
CE 122B	Computer-Generated Arch/ENGR/Construction		1	0	2
CEE 130	Arch Design: 3D Modeling, Method, & Process	1	3	0	4
CEE 131	Architecture Design Process	1	3	0	4
CEE 132	Interplay of Architecture & Engineering	2	2	0	4
CE 134A	Site & Space	2	2	0	4
CE 134B	Architectural Studio: Special Topic	2	2	0	4
CE 135A	Parametric Design	2	2	0	4
CEE 136	Green Architecture	2	2	0	4
CE 137A	Form & Structure	2	2	0	4
CE 137B	Intermediate Architecture Studio	0	5	0	5
CE 138A	Contemporary Architecture	0	3	0	3
CEE 139	Design Portfolio Methods	0	3	0	3
CE 140	Field Surveying Laboratory	0	3	3	3
CE 141	Project for ASCE: Des & Const of Steel Bridge	0	1	1	1
CE 142A	Sustainable Development	2	1	0	3
CE 143	Integrated Concurrent Engineering	0	3	1	3

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Printed April 2008

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CEE 147	Cases in Personality, Leadership & Negotiation	3	0	1	3
CE 148	Design/Construct of Affordable Housing	2	2	1	4
CE 154	Cases in Estimating Cost	1	2	0	3
CE 156	Building Systems Design	2	2	0	4
CEE 159	Career Skills Seminar	0	0	0	2
CE 160	Mechanics of Fluids Laboratory	1	1	2	2
CE 161A	Rivers, Streams and Canals (for 3 units)	1.5	1.5	0	3
CE 161A	Rivers, Streams and Canals (for 4 units)	2	2	1	4
CE 161S	Atmosphere & Global Environmental Change	3	0	0	3
CE 161T	Aerosols, Clouds, and Climate Change	3	0	0	3
CE 162	Modeling & Sim for Civil and Env Engineers	2	1	0	3
CE 164	Intro to Physical Oceanography	4	0	0	4
CE 166A	Watersheds and Wetlands	2	1	0	3
CE 166B	Floods & Droughts, Dams & Aqueducts	2	1	0	3
CE 166D	Water Resources & Water Hazards Field Trips	1	1	0	2
CE 169	Environmental & Water Resource Engineering	0	5	0	5
CE 171	Environmental Planning Methods	2	1	0	3
CE 172	Air Quality Management	2	1	0	3
CE 172A	Indoor Air Quality	1-2	1	0	2-3
CE 173A	Energy Resources	4-5	0	0	4-5
CE 173B	The Coming Energy Revolution	4	0	0	4
CE 175	Environ. Economics & Policy	0	0	0	5
CE 175A	CA Coast: Science, Policy and Law	1	0	0	3-4
CE 176A	Energy Efficient Buildings	2	2	1	4
CE 176B	Electric Power: Renewables and Efficiency	2	1-2	1	3-4
CE 177	Aquatic Chem & Biology	3	1	0	4
CE 178	Introduction to Human Exposure Analysis	2	1	1	3
CE 179A	Water Chemistry Lab	3	3	3	3
CE 180B	Structural Analysis	4	0	0	4
CE 181	Design of Steel Structures	0	4	0	4
CE 182	Design of Reinforced Concrete Structures	0	4	0	4
CE 183	Integrated Building Design	0	4	0	4
CE 190	Geotechnical Engineering	3	1	1	4
CE 195A/B	Structural Geology	2	1	1	4
CE 196	Engr. Geology Practice	2	1	0	3
CE 203	Statistical Models in Structural Engineering	4	0	0	4
CE 241	Techniques of Project Planning and Control	3	1	0	4

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CE 248	Real Estate Development	1	1	0	3
CE 261	Hydrology	3	0	0	3
CE 262	Transport and Mixing in Surface Water Flows	3	0	0	3
CE 265	Water Resources	3	1	1	3
CE 270	Contaminants	3	0	0	3
CE 273	Aquatic Chemistry	3	0	0	3
CE 273A	Water Chemistry Lab	2	0	2	2
CE 274	Environmental Microbiology I	3	0	0	3
CE 274A	Environmental Microbiology Lab	2	0	2	2
CE 278A	Air Pollution Physics and Chemistry	3	0	0	3

	ENGR Courses	SCI	DES	EXP	Total
	Unit Allocation 2008-09				
E 10	Introduction to Engineering Analysis	4	0	0	4
E 14	Applied Mechanics: Statics	2	1	0	3
E 15	Dynamics	2	1	0	3
E 20	Introduction to Chemical Engineering	2	1	0	3
E 25	Biotechnology	2	1	0	3
E 30	Engineering Thermodynamics	3	0	0	3
E 40	Introductory Electronics	3	2	2	5
E 50	Introd to Materials Science, Nanotechnology	4	0	0	4
E 50M	Introd to Materials Science, Biomaterials Emphasis	4	0	0	4
E 60	Engineering Economy	3	0	0	3
E 62	Introduction to Optimization	4	0	0	4
E 70A	Programming Methodology	4	1	0	5
E 70B	Programming Abstractions	2-4	1	0	3-5
E 70X	Programming Abstractions (Accelerated)	2-4	1	0	3-5
E 102E	Tech/Profess Writing for Electrical Engrs	0	0	0	1
E 102M	Tech/Profess Writing for Mechanical Engrs	0	0	0	1
E 105	Feedback Control Design	1	2	0	3
E 120	Fundamentals of Petroleum Engineer	2	1	0	3
E 205	Introduction to Control Design Techniques	1	2	0	3
E 206	Control System Design and Simulation	0	4	3	4
E 207A	Linear Control Systems I	0	0	0	3
E 207B	Linear Control Systems II	1	2	2	3
E 207C	Linear Control Systems III				3
E 209A	Analysis & Control of Non-linear Systems	0	3	0	3
E 209B	Adv Nonlinear Control	3	0	0	3

	Electrical Engineering (EE) Unit Allocation List 2008-09	SCI	DES	EXP	Total
EE 41	Physics of EE	3	2	2	5
EE 100	Seminar	0	0	0	1
EE 101A	Circuits I	4	0	1	4
EE 101B	Circuits II	3	1	1	4
EE 102A	Signal Processing & Linear Systems I	4	0	1	4
EE 102B	Signal Processing & Linear Systems II	4	0	1	4
EE 106	Planetary Exploration	3	0	0	3
EE 108A	Digital Systems I	3	1	1	4
EE 108B	Digital Systems II	3	1	1	3
EE 109	Digital Systems Design Laboratory	1	3	4	4
EE 113	Electronic Circuits	1	2	0	3
EE 114	Fund of Analog Integrated Circuits Design	0	3	0	3
EE 114X	Simulation-Based Circuit Design			0	2
EE 116	Semiconductor Device Physics	3	0	0	3
EE 118	Intro to Mechatronics	2	2	0	4
EE 122	Analog Circuits Lab	1	2	3	3
EE 133	Introduction to Communications Circuits	0	4	2	4
EE 134	Introduction to Photonics	2	2	2	4
EE 136	Intro to Nanophotonics & Nanostructures	3	0	0	3
EE 141	Engineering Electromagnetics	4	0	0	4
EE 142	Electromagnetic Waves	2.5	0.5	0	3
EE 144	Wireless Electromagnetic Design Lab.	1.5	1.5	1.5	3
EE 168	Introduction to Digital Image Processing	3	0	0	3
EE 178	Probabilistic Systems Analysis	1	0	0	3
EE 179	Introduction to Communications	3	0	0	3
EE 202	Medical Electronics	2.5	0.5	0	3
EE 203	The Entrepreneurial Engineer	1	0	0	1
EE 212	Integrated Circuit Fabrication Processes	2	1	0	3
EE 214	Analog Integrated Circuit Design	0	3	0	3
EE 216	Principles and Models of Semiconductor Devices	3	0	0	3
EE 222	Applied Quantum Mechanics I	3	0	0	3
EE 223	Applied Quantum Mechanics II	3	0	0	3
EE 228	Basic Physics for Solid State Electronics	3	0	0	3
EE 235	Guided Wave Optical Devices	3	0	0	3

EE 241	Waves I	3	0	0	3
EE 242	Electromagnetic Waves	2.5	0.5	0	3
EE 246	Microwave Engineering	1.5	1.5	0	3
EE 247	Introduction to Optical Fiber Communications	2	1	0	3
EE 252	Antennas/Telecomm and Remote Sensing	2	1	0	3
EE 256	Electromagnetics	1	2	0	3
EE 261	The Fourier Transform and Its Application	3	0	0	3
EE 263	Intro to Linear Dynamical Systems	2.5	0.5	0	3
EE 264	Digital Filtering	1.5	1.5	0	3
EE 265	Signal Processing Laboratory	2	1-2	3	3-4
EE 268	Intro to Modern Optics	3	0	0	3
EE 271	Introduction to VLSI Systems	1.5	1.5	0	3
EE 273	Digital Systems Engineering	2	1	0	3
EE 275	Logic Design	2	1	0	3
EE 276	Intro to Wireless Personal Communication	2	1	0	3
EE 278	Introduction to Statistical Signal Processing	3	0	0	3
EE 279	Intro to Communication Systems	3	0	0	3
EE 282	Computer Architecture and Organization	2	1	0	3
EE 284	Intro to Computer Networks	3	0	0	3
EE 293A	Fundamentals of Energy Processes	2	1	0	3
EE 310	Integrated Circuits Tech and Design Seminar	1	0	0	1
EE 380	Seminar on Computer	1	0	0	1

	Mechanical Engineering (ME) Unit Allocation 2008-09	SCI	DES	EXP	Total
ME 70	Introductory Fluids Engineering	4	0	1	4
ME 80	Stress, Strain & Strength (ME 80+81)	2	2	1	4
ME 101	Visual Thinking	0	3	0	3
ME 103D	Engineering Drawing	0	1	0	1
ME 112	Mechanical Systems (pre-2006)	1	3	0	4
ME 112	Mechanical Engineering Design (2006 +)	1	3	0	4
ME 113	Engineering Design (pre-2006)	0	4	0	4
ME 113	Mechanical Engineering Design	0	4	0	4
ME 130	Internal Combustion Engines (96/97)	1.5	1.5	3	3
ME 131A	Heat Transfer	4	0	2	4
ME 131B	Fluid Mechanics (2006 and beyond)	4	0	1	4
ME 140	Advanced Thermal Systems	4	1	2	5
ME 150	Internal Combustion Engines	1.5	1.5	3	3
ME 161	Dynamic Systems	3	1	0	4
ME 191	Engr Problems and Exper Investigation	0	0	1	1-5
ME 203	Manufacturing & Design	0	4	1	4
ME 210	Introduction to Mechatronics	2	2	3	4
ME 220	Introduction to Sensors	2	1	1	3
ME 227	Vehicle Dynamics & Control	1.5	1.5	1	3
ME 280	Skeletal Development & Evolution	2	1	0	3
ME 281	Biomechanics of Movement	2	1	1.5	3
ME 284A	Cardiovascular Bioengineering	3	0	0	3
ME 284B	Cardiovascular Bioengineering	3	0	0	3