



CALIFORNIA STATE UNIVERSITY, LOS ANGELES

Lower Division General Education Requirements (32 units)

Lower Division General Education Requirements (21 units)

ENGL 101	Composition I: Reflective and Expository Writing	4	→	Composition I: Reflective and Expository Writing	3
COMM 150	Oral Communication	4	→	Oral Communication	3
HIST 202A or 202B	United States Civilization	4	→	United States History	3
POLS 150	Government and American Society	4	→	United States Constitution and State/Local Government	3
BLOCK C - Humanities	3 courses from 3 areas	12	→	BLOCK C - Humanities	1 course from 3
BLOCK E – Lifelong Understanding and Self-Development	1 course	4	→	BLOCK D – Social Sciences	1 course 3
				ENGR 1500	Introduction to Engineering 3
University Requirement (4 units)		University Requirement			
ENGL 102	Composition II: Analytical and Persuasive Writing	4	→	ENGL 2030	Introduction to Technical Writing 3
WPE	(prior to completing 90 semester units)	NC/CR	→	WPE	(prior to completing 90 semester units) NC/CR

Lower Division Major Requirements (67 units)

Lower Division Major Requirements (53 units)

ENGR 150	Introduction to Engineering	1	→	ENGR 1500	Introduction to Higher Education for Engineers and Technologists 3
ME 103	Introduction to Mechanical Design	3			
CE/ME 201	Statics (4)	4	→	CE/ME 2010	Statics 3
ME 204	M.E Measurements and Instrumentation	4	→	ME 2040	M.E Measurements and Instrumentation 3
CE/ME 205	Strength of Materials I	4	→	CE/ME 2050	Strength of Materials I 3
ENGR 207	Materials Science and Engineering	4	→	ME 2070	Materials Science and Engineering 3
CE/ME 210	Matrix Algebra for Engineers	2	→	CE/ME 2120	Matrix Algebra and Statistics and Probability for Engineers 3
CE/ME 211	Statistics and Probability for Engineers	2			
EE 210	Electrical Measurements Laboratory	1	→	No longer in the program	

CHEM 101	General Chemistry I	5 →	CHEM 1040	General Chemistry for Engineers	4
CS 290*	Introduction to FORTRAN Programming	2 →	No longer in the program		
MATH 206	Calculus I: Differentiation	4 →	MATH 2110	Calculus I	4
MATH 207	Calculus II: Integration	4 →	MATH 2120	Calculus II	4
MATH 208	Calculus III: Sequences, Series, and Coordinate Systems	4 →	MATH 2130	Calculus III	3
MATH 209	Calculus IV: Several Variables	4			
MATH 215	Differential Equations	4 →	MATH 2150	Differential Equations	3
PHYS 211	Mechanics	5 →	PHYS 2110	General Physics I, Mechanics and Thermodynamics	5
PHYS 212	Wave, Optics and Thermodynamics	5 →	PHYS 2200	General Physics II, Electromagnetism and Optics	5
PHYS 213	Electricity and Magnetism	5			
ENGR 300	Economics for engineers	4 →	EE/ME 3000	Engineering Economics	3
ENGR 301	Ethics & Professionalism	4 →	EE/ME 3010	Ethics and Professionalism in Engineering	3
	NEW COURSE		ME 2800	Numerical Methods for Engineers I	1

Upper Division Major Requirements (41 units)

Upper Division Major Requirements (31 units)

CE/ME 303	Fluids mechanics I	4 →	CE/ME 3030	Fluids mechanics I	3
ME 306	Heat Transfer	4 →	ME 3060	Heat Transfer	3
ME 310	Mechanical Engineering Writing lab	1 →	No longer in the program		
CE/ME 312	Strength of Materials lab I	1 →	CE/ME 3120	Strength of Materials lab I	1
CE/ME 313	Fluid Mechanics Lab I	1 →	ME 3130	Fluid Mechanics Lab I	1
CE/ME 315	Thermal Systems Lab I	1 →	ME 3150	Thermal Systems Lab I	1
CE/ME 320	Dynamics	4 →	ME 3200	Dynamics	3
*ME 321	Kinematics of Mechanisms	4 →	ME 3210	Kinematics of Mechanisms	3
ME 323	Machine design	4 →	ME 3230	Machine design	3
ME 326A	Thermodynamics I	4 →	ME 3261	Thermodynamics I	3
ME 327	Manufacturing processes	4 →	ME 3270	Manufacturing processes	3
	NEW COURSE		ME 3800	Numerical Methods for Engineers II	2
	NEW COURSE		ME 3140	Machine Design Laboratory	1
	NEW COURSE		ME 3040	Experimental Methods Laboratory	1

*Students must select either ME 321 or ME 421 as a required course.

The other may be used as an upper division technical elective.

Senior Design Requirements (12 units)

Senior Design Requirements (5 units)

The Senior Design requirement is a 3 course series that must be completed sequentially

The first course (497A) is only offered during the Fall quarter.

ME 497A	Mechanical Engineering Senior Project	4	→	ME 4971	Mechanical Engineering Senior Project	2
ME 497B	Mechanical Engineering Senior Project	4	→	ME 4972	Mechanical Engineering Senior Project	3
ME 497C	Mechanical Engineering Senior Project	4				

The Senior Design requirement is a 2 course series that must be completed sequentially

The first course (4971) is only offered during the Fall quarter.

Upper Division Technical Electives (25 units)

Select 6 lecture courses and 1 laboratory courses from the following.

Lecture Electives (24 units):

ME 321*	Kinematics of Mechanisms	4	→	ME 3210	Kinematics of Mechanisms	3
ME 326B	Thermodynamics II	4	→	ME 3262	Thermodynamics II	3
ME 350	Biomechanics	4	→	ME 4500	Biomechanics	3
ME 354	Special Topics Course for Juniors in Mechanical Engineering	4	→	ME 3540	Special Topics Course for Juniors in Mechanical Engineering	3
ME 402	Advanced Mechanics of Materials	4	→	ME 4020	Advanced Mechanics of Materials	3
ME 403	Aerodynamics	4	→	ME 4030	Aerodynamics	3
ME 404	Compressible Aerodynamics	4	→	ME 4040	Compressible Aerodynamics	3
ME 406	Heat Transfer II	4	→	ME 4060	Heat Transfer II	3
ME 407	Design of Thermal Systems	4	→	ME 4070	Design of Thermal Systems	3
ME 408	Fluid Mechanics II	4	→	ME 4080	Fluid Mechanics II	3
ME 409	Mechanical Engineering Analysis	4	→	ME 4090	Mechanical Engineering Analysis	3
ME 410	Control of Mechanical Systems	4	→	ME 4100	Control of Mechanical Systems	3
ME 411	Vibrational Analysis I	4	→	ME 4110	Vibrational Analysis I	3
ME 414	Machine Design II	4	→	ME 4140	Machine Design II	3
ME 415	Air Conditioning	4	→	ME 4150	Air Conditioning	3
ME 416	Energy Systems	4	→	ME 4160	Energy Systems	3
ME 418	Renewable Energy and Sustainability	4	→	ME 4180	Renewable Energy and Sustainability	3
ME 419	Computer-Aided Mechanical Engineering	4	→	ME 4190	Computer-Aided Mechanical Engineering	3
ME 421*	Dynamics of Mechanisms	4	→	ME 4210	Dynamics of Mechanisms	3
ME 422	Optimization of Mechanical Engineering Systems	4	→	ME 4220	Optimization of Mechanical Engineering Systems	3
ME 423	Introduction to the Finite Element Method	4	→	ME 4230	Introduction to the Finite Element Method	3
ME 428	Automation and Computer-Aided Manufacturing	4	→	ME 4280	Automation and Computer-Aided Manufacturing	3
ME 430	Properties and Selection of Engineering Materials	4	→	ME 4300	Properties and Selection of Engineering Materials	3

Upper Division Technical Electives (13 units)

Select 4 lecture courses and 1 laboratory courses from the following.

Lecture Electives (12 units):

ME 454	Special Topics in Mechanical Engineering	→	ME 4540	Special Topics in Mechanical Engineering	3
ME 459	Rehabilitation Design & Internship	4 →	ME 4590	Rehabilitation Design & Internship	3
EE/ME 481	Introduction to Robotics	4 →	ME 4810	Introduction to Robotics	3
	NEW COURSE		ME 4510	Biomaterials	3
	NEW COURSE		ME 4520	Impact Biomechanics	3

Laboratory Electives (1 unit):

ME 412	Strength of Materials Laboratory II	1 →	No longer in the program		
ME 413	Fluid Mechanics Laboratory II	1 →	ME 4130	Fluid Mechanics Laboratory II	1
ME 431	Material Laboratory	1 →	ME 4310	Material Laboratory	1
ME 499	Undergraduate Directed Study	1 →	ME 4990	Undergraduate Directed Study	4

Laboratory Electives (1 unit):

General Education Upper Division Theme (12 units)

Upper Division GE

Theme **3 courses (12)**

Upper Division General Education Requirements (6 units)

All three courses must come from the same upper division theme.	12	Satisfied by part of the new GE program	6
The department recommends :			
· Gender in the diversity of Human Experience			
· Human Maturity and Aging Process and Problems			
The "Natural Sciences and Mathematics" course must have a biology designation (BIOL)			