

Reviewed and Updated May 2025

AEROSPACE ENGINEERING			MECHANICAL ENGINEERING		
FALL	WINTER	SPRING	FALL	WINTER	SPRING
Year 1			Year 1		
MAE-002. Intro to Aerospace Eng	Math-020E	MAE-030B. Dynamics & Vibrations	MAE-003. Intro to Mechanical Design	Math-20E	MAE-030B. Dynamics & Vibrations
MAE-008. MatLab	MAE-030A. Statics & Intro to Dynamics	MAE-131A. Solid Mechanics I	MAE-008. MatLab	MAE-030A. Statics & Intro to Dynamics	MAE-131A. Solid Mechanics I
*MAE-021. Aerospace Materials Sci	GE (College requirement)	TE (Technical Elective)	MAE-020. Elements of Materials Science	GE (College requirement)	TE (Technical Elective)
	GE	GE		GE	GE
Year 2			Year 2		
MAE-011. Thermodynamics	*MAE-101B. Advanced Fluid Mechanics	*MAE-104. Aerodynamics	MAE-011. Thermodynamics	*MAE-101A. Intro Fluid Mechanics	*MAE-101B. Advanced Fluid Mechanics
*MAE-101A. Intro Fluid Mechanics	*MAE-143A. Signals & Systems	*MAE-143B. Linear Control	*MAE-105. Intro to Mathematical Physics	*MAE-143A. Signals & Systems	*MAE-143B. Linear Control
*MAE-105. Intro to Mathematical Physics	*SE-160A. Aerospace Structural Mechanics I	MAE-170. Experimental Techniques	MAE-107. Computational Methods in Eng	TE	MAE-170. Experimental Techniques
MAE-107. Computational Methods in Eng	TE	GE	MAE-040. Linear Circuits	*MAE-160. or *MAE-131B.	GE
Year 3			Year 3		
*MAE-113. Fundamentals of Propulsion	*MAE-155A. Aerospace Design I	*MAE-155B. Aerospace Design II	*MAE-101C. Heat Transfer	*MAE-156A. Mechanical Design I	*MAE-156B. Mechanical Design II
*MAE-142. Dynamics & Controls	*MAE-175A. Aerospace Eng Lab	TE	*MAE-150. Computational Methods for Design	*MAE-171A. Mechanical Eng Lab	TE
TE	TE	GE	TE	TE	GE
GE	GE	TE	GE	GE	GE
<p>This academic plan assumes that you have completed all of the following courses at your previous college: Calculus I for Science and Engineering (MATH-020A), Calculus II for Science and Engineering (MATH-020B), Calculus and Analytic Geometry (MATH-020C), Differential Equations (MATH-020D), Linear Algebra (MATH-018), Complete calculus-based physics series (PHYS-002A, B, C), and general chemistry (CHEM-006A for Mech and Aero; CHEM-006A, B, C for Env)</p> <p>*If you have not completed all the courses listed above, this plan is not suitable for you. Please come and speak to an academic advisor as soon as possible to plan accordingly.</p> <p align="center">*ASTERISK DENOTES A COURSE THAT MUST BE TAKEN AT LEAST BY THAT QUARTER TO GRADUATE IN THREE YEARS</p>					

Mechanical Engineering Prerequisite Guide - FA23 Catalog

Subject	Course #	Title	Prerequisites	Course is prerequisite for MAE ___:	Quarter/s Usually Offered
MAE	003	Intro to Mechanical Design	Phys-002A	150, 156A	F, S
MAE	008	Matlab Programming for Eng. Analysis	Math-020A, Math-020B	107	F, W, S
MAE	011	Thermodynamics	Phys-002C, CHEM-006A	101B	F, W
MAE	020	Elements of Materials Science	Phys-002A, Chem-006A, Math-020C	160	F, W
MAE	030A	Statics and Intro to Dynamics	Math-020C, Phys-002A	030B, 131A, 150, 160	F, W
MAE	030B	Dynamics & Vibrations	MAE-030A	156A	S
MAE	040	Linear Circuits	Math-020D, Math-018, Phys-002B	170	F, W
MAE	101A	Intro Fluid Mechanics	Phys-002A, Math-020D, Math-020E	101B, 101C, 171A	F, W
MAE	101B	Advanced Fluid Mechanics	MAE-011, MAE-101A	101C	W, S
MAE	101C	Heat Transfer	MAE-101A, MAE-101B, MAE-105	156B	F
MAE	105	Intro to Mathematical Physics	Phys-002A, Phys-002B, Math-020D	101C, 131B	F, S
MAE	107	Computational Methods in Engineering	MAE-008, Math-018	150	F, S
MAE	131A	Solid Mechanics I	Math-020D, MAE-030A	131B, 156A, 160	F, S
MAE	131B	Fundamentals of Solid Mechanics II	MAE-131A, MAE-105	156B	W
MAE	143A	Signals and Systems	Math-020D, Math-020E, Math-018	143B	W
MAE	143B	Linear Control	MAE-143A	156B, 171A	S
MAE	150	Computational Methods/Design	MAE-003, MAE-107, MAE-030A	156A	F, W, S
MAE	156A	Fundamental Principles of Mech. Design I	MAE-003, MAE-030B, MAE-131A, MAE-150, MAE-170	156B	F, W
MAE	156B	Fundamental Principles of Mech. Design II	MAE-101C, MAE-143B, MAE-156A, MAE-131B or 160		W, S
MAE	160	Mechanical Behavior of Materials	MAE-020, MAE-030A, MAE-131A	156B	W
MAE	170	Experimental Techniques	Phys-002C & Phys-002CL (or MAE-040/140)	156A, 171A	F, S
MAE	171A	Mechanical Eng. Lab I	MAE-101A, MAE-143B, MAE-170		W

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All courses must be taken for a letter grade (no P/NP) For more information, please contact an MAE undergraduate advisor: mae-ugradadm@ucsd.edu