Reviewed and Updated May 2025

AEROSPACE ENGINEERING		
FALL	**WINTER**	**SPRING**
Year 1		
MAE 2- Intro to Aerospace Eng	Math 20E	MAE 30B- Dynamics & Vibrations
MAE 8- MatLab	MAE 30A- Statics and Intro to Dynamics	MAE 131A- Solid Mechanics
*MAE 21-Aerospace Materials Science	GE (College requirement)	TE (Technical Elective)
	GE	GE
Year 2		
MAE 11-Thermodynamics	*MAE 101B- Advanced Fluids	*MAE 104- Aerodynamics
*MAE 101A- Intro to Fluids	*MAE 143A- Signals and 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	GE
Year 3		
*MAE 113- Propulsion	*MAE 155A- Aerospace Eng Design I	*MAE 155B- Aerospace Eng Design II
*MAE 142- Dynamics and Controls	*MAE 175A- Engineering Lab	TE
TE	TE	GE
GE	GE	TE

MECHANICAL ENGINEERING		
FALL	**WINTER**	**SPRING**
Year 1		
MAE 3- Graphics and Design	Math 20E	MAE 30B- Dynamics & Vibrations
MAE 8- MatLab	MAE 30A- Statics and Intro to Dynamics	MAE 131A- Solid Mechanics
MAE 20- Materials Science	GE (College requirement)	TE (Technical Elective)
	GE	GE
Year 2		
MAE 11-Thermodynamics	*MAE 101A- Intro to Fluids	*MAE 101B- Advanced Fluids
*MAE 105-Intro to Mathematical Physics	*MAE 143A- Signals and Systems	*MAE 143B- Linear Control
MAE 107- Computational Methods	TE	MAE 170- Experimental Techniques
MAE 40- Linear Circuits	*MAE 160 **or** *MAE 131B	GE
Year 3		
*MAE 101C- Heat Transfer	*MAE 156A- Design Lab I	*MAE 156B- Design Lab II
*MAE 150- Computer-Aided Design	*MAE 171A- Engineering Lab	TE
TE	TE	GE
GE	GE	GE

This academic plan assumes that you have completed all of the following courses at your previous college:
Calculus I for Science and Engineering (MATH 20A), Calculus II for Science and Engineering (MATH 20B), Calculus and Analytic Geometry (MATH 20C), Differential Equations (MATH 20D), Linear Algebra (MATH 18), Complete calculus-based physics series (PHYS 2A, B, C), and general chemistry (CHEM 6A for Mech and Aero; CHEM 6A, B, C for Env)

***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.**

*** Summer courses are outside the regular academic year and can be cancelled for any reason. Therefore, students should not count on those courses in the event they are cancelled and possibly delay graduation.**

*ASTERISK DENOTES A COURSE THAT MUST BE TAKEN AT LEAST BY THAT QUARTER TO GRADUATE IN THREE YEARS

Subject	Course #	Title	Prerequisites	Course is prerequisite for MAE ___:	Quarter/s *Usually* Offered
MAE	**3**	Intro to Mechanical Design	Phys 2A	150, 156A	F, S
MAE	**8**	Matlab Programming for Eng. Analysis	Math 20A, Math 20B	107	F, W, S
MAE	**11**	Thermodynamics	Phys 2C, CHEM 6A	101B	F, W
MAE	**20**	Elements of Materials Science	Phys 2A, Chem 6A, Math 20C	160	F, W
MAE	**30A**	Statics and Intro to Dynamics	Math 20C, Phys 2A	30B, 131A, 150, 160	F, W
MAE	**30B**	Dynamics & Vibrations	MAE 30A	156A	S
MAE	**40**	Linear Circuits	Math 20D, Math 18, Phys 2B	170	F, W
MAE	**101A**	Intro Fluid Mechanics	Phys 2A, Math 20D, Math 20E	101B, 101C, 171A	F, W
MAE	**101B**	Advanced Fluid Mechanics	MAE 11, MAE 101A	101C	W, S
MAE	**101C**	Heat Transfer	MAE 101A, MAE 101B, MAE 105	156B	F
MAE	**105**	Intro to Mathematical Physics	Phys 2A, Phys 2B, Math 20D	101C, 131B	F, S
MAE	**107**	Computational Methods in Engineering	MAE 8, Math 18	150	F, S
MAE	**131A**	Solid Mechanics I	Math 20D, MAE 30A	131B, 156A, 160	F, S
MAE	**131B**	Fundamentals of Solid Mechanics II	MAE 131A, MAE 105	156B	W
MAE	**143A**	Signals and Systems	Math 20D, Math 20E, Math 18	143B	W
MAE	**143B**	Linear Control	MAE 143A	156B, 171A	S
MAE	**150**	Computational Methods/Design	MAE 3, MAE 107, MAE 30A	156A	F, W, S
MAE	**156A**	Fundamental Principles of Mech. Design I	MAE 3, MAE 30B, 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 20, MAE 30A, MAE 131A	156B	W
MAE	**170**	Experimental Techniques	Phys 2C & Phys 2CL (or MAE 40/140)	156A, 171A	F, S
MAE	**171A**	Mechanical Eng. Lab I	MAE 101A, MAE 143B, MAE 170		W

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