

MAE Transfer Students Three Year Plans

FA19 Catalog The following is a recommended sequence of required courses for transfer students. Updated January 2024

AEROSPACE ENGINEERING		
FALL	WINTER	SPRING
<b>Year 1</b>		
MAE 2- Intro to Aerospace	Math 20E	MAE 131A- Solid Mechanics
MAE 8- Intro. To MatLab	MAE 30A- Statics and Intro to Dynamics	MAE 30B- Dynamics & Vibrations
*MAE 21-Aerospace Materials Science	GE (College requirement)	GE
	GE	GE
<b>Year 2</b>		
MAE 11- Thermodynamics	*MAE 101A- Intro to Fluids	*MAE 101B- Advance Fluids
*MAE 105- Mathematical Physics	*MAE 143A- Signals and Systems	*MAE 143B- Linear Control
MAE 107- Computational Methods	TE (Technical Elective)	MAE 170- Experimental Technique
MAE 180 - Orbital Mechanics	*SE 160A- Aerospace Structural Mechanics I	*SE 160B- Aerospace Structural Mechanics II
<b>Year 3</b>		
*MAE 101C- Heat Transfer	*MAE 155A- Aerospace Design	*MAE 155B- Aeronautics Design
*MAE 104- Aerodynamics	*MAE 175A- Engineering Lab	GE
GE	*MAE 142- Dynamics and Controls	GE
GE	*MAE 113- Propulsion	TE

MECHANICAL ENGINEERING		
FALL	WINTER	SPRING
<b>Year 1</b>		
MAE 3- Graphics and Design	Math 20E	MAE 131A- Solid Mechanics
MAE 8- Intro. To MatLab	MAE 30A- Statics and Intro to Dynamics	MAE 30B- Dynamics & Vibrations
MAE 20- Materials Science	GE (College requirement)	TE (Technical Elective)
	GE	GE
<b>Year 2</b>		
MAE 11- Thermodynamics (formerly MAE 110A)	*MAE 101A- Intro to Fluids	*MAE 101B- Advance Fluids
*MAE 105- Mathematical Physics	*MAE 143A- Signals and Systems	*MAE 143B- Linear Control
MAE 107- Computational Methods	TE	MAE 170- Experimental Technique
MAE 40- Linear Circuits	*MAE 160 or *MAE 131B	GE
<b>Year 3</b>		
*MAE 101C- Heat Transfer	*MAE 156A- Design Lab I	*MAE 156B- Design Lab II
*MAE 150- Computer-Aid Design	*MAE 171A- Engineering Lab I	TE
TE (Technical Elective)	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.*

**\*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	2	Intro to Aerospace Eng.		155A	F
MAE	8	Matlab Programming for Eng. Analysis	Math 20A, Math 20B	107	F, W, S
MAE	11 (prev. 110A)	Thermodynamics	Phys 2C, CHEM 6A	101B, 113	F, W
MAE	21	Aerospace Materials Science	Phys 2A (or 4A), Chem 6A, Math 20B	SE 160A, MAE 155A	F
MAE	30A (prev. 130A)	Statics & Intro to Dynamics	Math 20C, Phys 2A	30B (130B), 131A	F, W
MAE	30B (prev. 130B)	Dynamics & Vibrations	MAE 30A (130A)	SE 160A	S
MAE	101A	Intro Fluid Mechanics	Phys 2A, Math 20D, Math 20E	101B, 101C, 104, 113	F, W
MAE	101B	Advanced Fluid Mechanics	MAE 11 (or 110A), MAE 101A	101C, 104, 113	W, S
MAE	101C	Heat Transfer	MAE 101A, MAE 101B, MAE 105	175A	F
MAE	104	Aerodynamics	MAE 101A, MAE 101B	142, 155A	F
MAE	105	Intro to Mathematical Physics	Phys 2A, Phys 2B, Math 20D	101C	F, S
MAE	107	Computational Methods in Engineering	MAE 8, Math 18 (or 20F)		F, S
MAE	113	Fundamentals of Propulsion	MAE 11 (or 110A), MAE 101A, MAE 101B	155B	W
MAE	131A	Solid Mechanics I	Math 20D, MAE 30A (130A)	SE 160A	F, S
MAE	142	Dynamics and Control of Aerospace Vehicles	MAE 104, MAE 143B	155B	W
MAE	143A	Signals and Systems	Math 20D, Math 20E, Math 18 (or 20F)	143B	W
MAE	143B	Linear Control	MAE 143A	142, 175A	S
MAE	155A	Aerospace Eng. Design I	MAE 2, MAE 21 (or SE 2 or SE 104), MAE 104, MAE 30B (or 130C), SE 160A	155B	W
MAE	155B	Aerospace Eng. Design II	MAE 113, MAE 142, MAE 155A, MAE 170		S
MAE	170	Experimental Techniques	PHYS 2C & PHYS 2CL (or MAE 40/140)	155B, 175A	F, S
MAE	175A	Aerospace Eng. Lab I	MAE 101C, MAE 143B, MAE 170		W
MAE	180	Orbital Mechanics			F
SE	160A	Aerospace Structural Mechanics I	MAE 21 (or SE 2/L), MAE 30B (130B), MAE 131A	155A, SE 160B	W
SE	160B	Aerospace Structural Mechanics II	SE 160A		S

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