AEROSPACE ENGINEERING
TECHNICAL ELECTIVES
(This is a general TE list - refer to the mae.ucsd.edu website for the specific list of TEs for a specialization)

- Aerospace Engineering majors following the Fall 2023 catalog must complete five TE’s.
- Aerospace Engineering majors following the Fall 2019 catalog must complete two TE’s.
- Aerospace Engineering majors following a pre-Fall 2019 catalog must complete one TE

-Not all courses are offered each year/quarter.
-All prerequisites are enforced.

The following classes that are not already required for your major are approved as TEs:

MAE 101C    Heat Transfer (approved TE for FA23 plan only)
MAE 101D    Intermediate Heat Transfer
MAE 108    Probability and Statistical Methods for Mechanical Engineering
MAE 110    Thermodynamic Systems (formerly 110B)
MAE 114    Space Propulsion
MAE 118    Intro to Energy & Environment
MAE 119    Intro to Renewable Energy: Solar & Wind
MAE 120    Intro to Nuclear Energy
MAE 122    Flow & Transport in the Environment
MAE 130    Advanced Vibrations
MAE 131B   Solid Mechanics II
MAE 133    Finite Element Methods
MAE 144    Embedded Control and Robotics
MAE 145    Robotic Planning and Estimation
MAE 146    Intro to ML Algorithms
MAE 148    Intro to Autonomous Vehicles
MAE 149    Sensor Networks
MAE 150    Computational Methods for Design
MAE 154    Product Design & Entrepreneurship
MAE 180    Orbital Mechanics
MAE 181    Space Mission Analysis and Design
MAE 182    Spacecraft Guidance and Navigation
MAE 184    Flight Simulation Techniques
MAE 185    Computational Fluid Mechanics
MAE 190    Design of Machine Elements  (Note: Must be this specific course topic)
MAE 199    Independent Study (2 quarters of MAE 199 can be used for 1 TE under
certain circumstances. See our website, mae.ucsd.edu, for details.)

SE 120    Engineering Graphics and Computer-Aided Structural Design
SE 131    Finite Element Analysis
SE 142    Design of Composite Structures
SE 143A    Aerospace Structural Design I
SE 143B    Aerospace Structural Design II

Note: SE 143A/B are the SE senior design capstone courses so students will be expected to complete both A&B in consecutive quarters (credit will be given for 2 TEs)
SE 160B  Aerospace Structural Mechanics II (approved TE for FA23 plan only)
SE 163  Nondestructive Evaluation
SE 171  Aerospace Structures Repair
ECE 120  Solar System Physics
ECE 172A  Introduction to Intelligent Systems
MATH 102  Applied Linear Algebra
MATH 120A  Elements of Complex Analysis
MATH 175  Numerical Methods for Partial Differential Equations
MATH 187A  Intro to Cryptography

**MAE 160 is not an approved TE due to overlapping material in SE 160A/B.**

**GRADUATE COURSES***

MAE 200  Controls
MAE 201  Mechanics of Fluids
MAE 202  Thermal Processes
MAE 203  Solid Mechanics and Materials
MAE 204  Robotics
MAE 206  Energy Systems
MAE 208  Mathematics for Engineers
MAE 211  Intro to Combustion
MAE 212  Introductory Compressible Flow
MAE 222  Human Space Exploration
MAE 240  Space Flight Mechanics
SE 201A  Advanced Structural Analysis
SE 202  Structural Stability
SE 203  Structural Dynamics

**Global TIES:** One quarter of ENG 100D and two consecutive quarters of ENG 100L can be used for one TE. *(only for students following the FA19, FA23 catalog)*

* Enrollment in graduate courses requires approval by the instructor and course dept via an EASy request.

*All TEs must be taken for a letter grade. No P/NP grades allowed except in MAE 199.*

For information about receiving TE credit for courses not on this list, please contact a MAE undergraduate advisor through the VAC.