



## Master of Aerospace Engineering

### Recommended Course Plans - Even year Autumn start (2020, 2022, 2024)

The following plans are designed with course prerequisites and quarter offerings in mind. We recommend contacting the MAE Program Adviser if you are considering deviating from the outlines below, as some changes will impact your ability to have an available course option in a future quarter.

#### CONTROLS

	AUTUMN	WINTER	SPRING
YEAR 1	AE 501 AE 598	AE 510 (core) AE 598	AE 520/540 (breadth) AE 598
YEAR 2	AE 513 (core) AE 598	AE 511 (core) AE 598	AE 512 (core) AE 598
YEAR 3	AE 514 (core) AE 598	AE 524*/541*/550 (breadth) AE 598	AE 520/540/542* (breadth) AE 598

#### Core Coursework:

AE 510: Linear Systems Theory  
 AE 511: Classical Control Theory  
 AE 512: Dynamics, Stability, & Control of Vehicles  
 AE 513: Multivariable Control  
 AE 514: Estimation Theory

#### FLUIDS

	AUTUMN	WINTER	SPRING
YEAR 1	AE 501 AE 598	AE 510/550 (breadth) AE 598	AE 520 (core) AE 598
YEAR 2	AE 521 (core) AE 598	AE 522 (core) AE 598	AE 512*/540/553*/554* (breadth) AE 598
YEAR 3	AE 523 (core) AE 598	AE 524 (core) AE 598	AE 512*/540/552*/553* (breadth) AE 598

#### Core Coursework:

AE 520: Fluid Dynamics  
 AE 521: Aircraft Propulsion  
 AE 522: Rocket Propulsion  
 AE 523: Aircraft Noise  
 AE 524: Computational Methods in Aerodynamics

## STRUCTURES

	AUTUMN	WINTER	SPRING
YEAR 1	AE 501 AE 598	AE 550 (breadth/core) AE 598	AE 520/552*/553 (breadth) *do not take AE 540 during this quarter* AE 598
YEAR 2	AE 540 (core) AE 598	AE 544 (core) AE 598	AE 542 (core) or AE 520/553*/554 (breadth) AE 598
YEAR 3	AE 543 (core) AE 598	AE 541 (core) AE 598	AE 520/552/553* (breadth) or AE 542 (core) AE 598

\*\* AE 550 can count as a core course OR a breadth elective

### Core Coursework:

AE 540: Mechanics of Solids (required)

*Take 4 out of the 5 following classes --*

AE 541: Finite Element Methods

AE 542: Fatigue & Fracture

AE 543: Structural Vibrations

AE 544: Additive Manufacturing

AE 550: Mechanics of Composites

## COMPOSITES

	AUTUMN	WINTER	SPRING
YEAR 1	AE 501 AE 598	AE 550 (core) AE 598	AE 552 (core) AE 598
YEAR 2	AE 540/513/521 (breadth) AE 598	AE 551 (core) AE 598	AE 554 (core) AE 598
YEAR 3	AE 540/514/523 (breadth) AE 598	AE 524*/ 541*/550 (breadth) AE 598	AE 553 (core) AE 598

\*Breadth elective with a prerequisite other than AE 501

### Core Coursework:

AE 550: Mechanics of Composites

AE 551: Aerospace Composite Design I

AE 552: Aerospace Composite Design II

AE 553: Advanced Composite Structural Analysis

AE 554: Manufacturing of Aerospace Composites



## Master of Aerospace Engineering

### Recommended Course Plans - **Odd year Autumn start (2023, 2025)**

The following plans are designed with course prerequisites and quarter offerings in mind. We recommend contacting the MAE Program Adviser if you are considering deviating from the outlines below, as some changes will impact your ability to have an available course option in a future quarter.

#### CONTROLS

	AUTUMN	WINTER	SPRING
YEAR 1	AE 501 AE 598	AE 510 (core) AE 598	AE 520/540 (breadth) AE 598
YEAR 2	AE 514 (core) AE 598	AE 511 (core) AE 598	AE AE 512 (core) AE 598
YEAR 3	AE 513 (core) AE 598	AE 522*/541*/550 (breadth) AE 598	AE 520/540/542*/553* (breadth) AE 598

#### Core Coursework:

- AE 510: Linear Systems Theory
- AE 511: Classical Control Theory
- AE 512: Dynamics, Stability, & Control of Vehicles
- AE 513: Multivariable Control
- AE 514: Estimation Theory

#### FLUIDS

	AUTUMN	WINTER	SPRING
YEAR 1	AE 501 AE 598	AE 510/550 (breadth) AE 598	AE 520 (core) AE 598
YEAR 2	AE 523 (core) AE 598	AE 524 (core) AE 598	AE 512*/540/552*/553* (breadth) AE 598
YEAR 3	AE 521 (core) AE 598	AE 522 (core) AE 598	AE 512*/540/553*/554* (breadth) AE 598

#### Core Coursework:

- AE 520: Fluid Dynamics
- AE 521: Aircraft Propulsion
- AE 522: Rocket Propulsion
- AE 523: Aircraft Noise
- AE 524: Computational Methods in Aerodynamics

## STRUCTURES

	AUTUMN	WINTER	SPRING
YEAR 1	AE 501 AE 598	AE 550 (breadth/core) AE 598	AE 520/553*/554* (breadth) *do not take AE 540 during this quarter* AE 598
YEAR 2	AE 540 (core) AE 598	AE 541 (core) AE 598	AE 542 (core) or AE 520/552*/553* (breadth) AE 598
YEAR 3	AE 543 (core) AE 598	AE 544 (core) AE 598	AE 520/553*/554* (breadth) or AE 542 (core) AE 598

\*\* AE 550 can count as a core course OR a breadth elective

### Core Coursework:

AE 540: Mechanics of Solids (required)

*Take 4 out of the 5 following classes --*

AE 541: Finite Element Methods

AE 542: Fatigue & Fracture

AE 543: Structural Vibrations

AE 544: Additive Manufacturing

AE 550: Mechanics of Composites

## COMPOSITES

	AUTUMN	WINTER	SPRING
YEAR 1	AE 501 AE 598	AE 550 (core) AE 598	AE 553 (core) AE 598
YEAR 2	AE 514/523/540 (breadth) AE 598	AE 551 (core) AE 598	AE 552 (core) AE 598
YEAR 3	AE 513/523/540 (breadth) AE 598	AE 510/511/541/522/544 (breadth) AE 598	AE 554 (core) AE 598

\*Breadth elective with a prerequisite other than AE 501

### Core Coursework:

AE 550: Mechanics of Composites

AE 551: Aerospace Composite Design I

AE 552: Aerospace Composite Design II

AE 553: Advanced Composite Structural Analysis

AE 554: Manufacturing of Aerospace Composites