# A Suggested Course Plan for: Aerospace Engineering

## First Year

### Fall Semester
- **GE B**
- **AME 105**
- **MATH 125** (GE F)
- **CHEM 105AL or MASC 110L**
- **ENGR 102**

### Spring Semester
- **GE A**
- **MATH 126 or MATH 129**
- **PHYS 151L (GE E)**
- **ITP 168**

## Second Year

### Fall Semester
- **GE C**
- **AME 201**
- **MATH 226 or MATH 229**
- **PHYS 152L**
- **OPTIONAL ELECTIVE**

### Spring Semester
- **AME 261**
- **AME 204 or MATH 226**
- **MATH 245**
- **AME 231L**
- **ASTE 280 or ITP 268**
- **OPTIONAL ELECTIVE**

## Third Year

### Fall Semester
- **GE D**
- **AME 301**
- **AME 310**
- **AME 308**
- **AME 341AL**
- **OPTIONAL ELECTIVE**

### Spring Semester
- **GE C**
- **AME 302**
- **AME 309**
- **PHYS 153L**
- **AME 341BL**
- **OPTIONAL ELECTIVE**

## Fourth Year

### Fall Semester
- **GE B**
- **AME 404**
- **TECHNICAL ELECTIVE**
- **TECHNICAL ELECTIVE**
- **AME 441AL**
- **OPTIONAL ELECTIVE**

### Spring Semester
- **WRIT 340**
- **AME 436**
- **AME 451**
- **AME 481**
- **OPTIONAL ELECTIVE**
- **OPTIONAL ELECTIVE**

### Mathematics (16 Units)
- **MATH 125**: Calculus I
- **MATH 126** or **MATH 129**: Calculus II
- **MATH 226** or **MATH 229**: Calculus III
- **MATH 245**: Mathematics of Phys. and Engr.

### Physics (12 Units)
- **PHYS 151L**: Mechanics and Thermodynamics
- **PHYS 152L**: Electricity and Magnetism
- **PHYS 153L**: Optics and Modern Physics

### Chemistry / Materials Science (4 Units)
- **CHEM 105AL**: General Chemistry
- **MASC 110L**: Materials Science

### General Education (32 Units)
- **GE A**: The Arts (1 Course)
- **GE B**: Humanistic Inquiry (2 Courses)
- **GE C**: Social Analysis (2 Courses)
- **GE D**: Life Sciences (1 Course)
- **GE E**: Physical Sciences (1 Course)
- **GE F**: Quantitative Reasoning (1 Course)
- **GE G,H**: Global Perspectives (2 Courses)*
- **GESM**: General Education Seminar (1 Course)*

### Writing (7 Units)
- **WRIT 150**: Writing and Critical Reasoning
- **WRIT 340**: Advanced Writing

### Engineering (68 Units)
- **AME 105**: Intro. to Aerospace Engineering
- **AME 201**: Statics
- **AME 204**: Strength of Materials
- **AME 231L**: Mechanical Behavior of Materials
- **AME 261**: Basic Flight Mechanics
- **AME 301**: Dynamics
- **AME 302**: Dynamic Systems
- **AME 308**: Comp.-Aided Analysis for Design
- **AME 309**: Dynamics of Fluids
- **AME 310**: Engineering Thermodynamics I
- **AME 341AL**: Mechatronics Laboratory I
- **AME 341BL**: Mechatronics Laboratory II
- **AME 404**: Comp. Solutions to Engr. Problems
- **AME 436**: Energy and Propulsion
- **AME 441AL**: Senior Projects Laboratory
- **AME 451**: Linear Control Systems I
- **AME 481**: Aircraft Design
- **ASTE 280**: Astronautics & Space Environment I
- **ENGR 102**: Engineering Freshman Academy
- **ITP 168**: Introduction to MATLAB

### Optional Electives

* SPECIAL NOTES

Courses with this symbol may be satisfied with AP, IB or A-Level exams. See page 17 for more information.

**GE**: Engineering students are encouraged to satisfy GE G and GE H with a course that also satisfies a Core Literacy. GE H may be satisfied by exam. Additionally, your GESM course should be taken in categories A, B, C, or D only. See pp. 16-17 for more information and consult your advisor for detailed assistance.

**OPTIONAL ELECTIVES**: Consult with your academic advisor to explore optional elective courses. These courses are not required.

**TECHNICAL ELECTIVES**: Any upper-division course in Engineering, Chemistry, Physics, Mathematics, or Math 225 except CE 404, 412, and ISE 440. No more than 3 units of 490 course work can be used for Technical Electives. See major advisor for exceptions/substitutions.
Optional Course Tracks for the Aerospace Engineering Degree:

The Aerospace Engineering curriculum covers foundational concepts in a number of areas, ranging from dynamics and aerodynamics to computer aided analysis for design to computational solutions to engineering problems. Through your first five to six semesters, students will gain exposure to foundational concepts in Aerospace and Mechanical Engineering.

Your final two to three semesters in the program, you may continue and graduate with the Aerospace Engineering Standard Track listed to the left or choose to specialize.

### AERONAUTICS

**Fourth Year: FALL SEMESTER**

- GEB 459
- AME 451
- AME 457 or AME 443
- AME 441a
- AME 481
- AME 460
- AME 459 or ASTE 480

**Fourth Year: SPRING SEMESTER**

- WRIT 340
- AME 436
- AME 481
- AME 460
- AME 451
- AME 302, MATH 245
- WRIT 340

### STRUCTURES

**Fourth Year: FALL SEMESTER**

- GEB 451
- AME 353 or CE 358
- AME 441a
- AME 403 or AME 420
- AME 408 or CE 458
- WRIT 340

**Fourth Year: SPRING SEMESTER**

- WRIT 340
- AME 436
- AME 481
- AME 443
- AME 453
- WRIT 340

### CONTROLS

**Fourth Year: FALL SEMESTER**

- GEB 451
- AME 459 or ASTE 480
- AME 441a
- AME 453
- AME 331 or AME 310, MATH 226
- WRIT 340

**Fourth Year: SPRING SEMESTER**

- WRIT 340
- AME 451
- AME 430
- AME 441a
- AME 312
- WRIT 340

### THERMAL SYSTEMS

**Third Year: SPRING SEMESTER**

- GEC 451
- AME 302, MATH 245
- AME 309
- AME 331
- AME 341b
- WRIT 340

**Fourth Year: FALL SEMESTER**

- WRIT 340
- AME 451
- AME 430
- AME 441a
- AME 312
- WRIT 340

**Fourth Year: SPRING SEMESTER**

- GE B
- AME 436
- AME 481
- PHYS 153
- AME 408
- WRIT 340

### DESIGN

**Fourth Year: FALL SEMESTER**

- GEB 451
- AME 459 or ASTE 480
- AME 441a
- AME 430
- AME 312
- WRIT 340

**Fourth Year: SPRING SEMESTER**

- WRIT 340
- AME 436
- AME 481
- AME 408
- WRIT 340