## Astronautical Engineering

### 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 or MASC 110L**: General Chemistry* or 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 (8 Units)
- **WRIT 150**: Writing and Critical Reasoning
- **WRIT 340**: Advanced Writing

### Engineering (68 Units)
- **AME 201**: Statics
- **AME 204**: Strength of Materials
- **AME 301**: Dynamics
- **AME 308**: Comp. Aided Analysis for Design
- **AME 341aL**: Mechoptronics Laboratory I
- **AME 341bL**: Mechoptronics Laboratory II
- **AME 404**: Comp. Solutions to Engr. Problems
- **ASTE 331a**: Spacecraft Systems Engineering
- **ASTE 331b**: Spacecraft Systems Engineering
- **ASTE 404**: Computational Programming & Numerical Methods
- **AME 421**: Space Mission Design
- **ASTE 470**: Spacecraft Propulsion
- **ASTE 480**: Spacecraft Dynamics
- **ENGR 102**: Engineering Freshman Academy
- **ITP 168**: Introduction to MATLAB

### Technical Electives
- Any upper-division course in engineering, chemistry, physics, and mathematics. See academic advisor for exceptions/substitutions.

### Special Notes
- **Courses with the * symbol may be satisfied with AP, IB or A-Level exams. See page 16 for more information.**
- **GESM**: GESM can be taken from GE categories: A, B, C, or D. Courses listed in the guide are options for a four-year course plan.
- **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 AP/IB. Additionally, your GESM course should be taken in categories A, B, C, or D only. See page 15 for more information and consult your advisor for detailed assistance.
- **Technical Electives**: Any upper-division course in engineering, chemistry, physics, mathematics. See academic advisor for exceptions/substitutions.