# ASTRONAUTICAL ENGINEERING

## 2018-19 MAJOR COURSE PLAN

### FIRST YEAR

**FALL SEMESTER**
- WRIT 150  
- ASTE 101L  
- 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 B  
- AME 201  
- MATH 226 or MATH 229  
- PHYS 152L  
- OPTIONAL ELECTIVE

**SPRING SEMESTER**
- GE A  
- MATH 245  
- PHYS 153L  
- ASTE 280

### THIRD YEAR

**FALL SEMESTER**
- GE C  
- AME 301  
- AME 301a  
- AME 341aL  
- TECHNICAL ELECTIVE

**SPRING SEMESTER**
- WRIT 340  
- ASTE 301b  
- AME 308  
- AME 341bL  
- TECHNICAL ELECTIVE

### FOURTH YEAR

**FALL SEMESTER**
- AME 441a  
- TECHNICAL ELECTIVE  
- ASTE 470  
- AME 404  
- TECHNICAL ELECTIVE

**SPRING SEMESTER**
- GE B  
- ASTE 421  
- ASTE 480  
- TECHNICAL ELECTIVE  
- TECHNICAL 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 201: Statics  
- AME 204: Strength of Materials  
- AME 301: Dynamics  
- AME 308: Comp.-Aided Analysis for Design  
- AME 341AL: Mechatronics Laboratory I  
- AME 341BL: Mechatronics Laboratory II  
- AME 404: Comp. Solutions to Engr. Problems  
- AME 441AL: Senior Projects Laboratory  
- ASTE 101L: Intro. to Astronautics  
- ASTE 280: Astronautics & Space Environment I  
- ASTE 301A: Thermal and Statistical Systems I  
- ASTE 301B: Thermal and Statistical Systems II  
- ASTE 330: Astronautics & Space Environment II  
- ASTE 421: Space Mission Design  
- ASTE 470: Spacecraft Propulsion  
- ASTE 480: Spacecraft Dynamics  
- ENGR 102: Engineering Freshman Academy  
- ITP 168: Introduction to MATLAB  
- TECHNICAL ELECTIVES

### *SPECIAL NOTES*

Courses with this symbol may be satisfied with AP, IB or A-Level exams. See page 22 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 page 21 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 EE 404, 412, and ISE 440. No more than 3 units of ASTE 490 or ASTE 491 course work can be used for Technical Electives.