

NAME: _____

AEROSPACE ENGINEERING

UID: _____ A.A. A.S. Post-Bac

| GENERAL EDUCATION REQUIREMENTS | | | |
|---|---------------|--|--------|
| Fundamental Studies | | | |
| Academic Writing (AW) | ENGL 101 | | 3 |
| Professional Writing (PW) | ENGL 39X | | 3 |
| Oral Communication (OC) | | | 3 |
| Mathematics (MA) | MATH 140 | | 4 |
| Analytic Reasoning (AR) | MATH 140 | | 0 |
| Distributive Studies | | | |
| History/Social Sciences (HS*) | | | 3 |
| History/Social Sciences (HS*) | | | 3 |
| Humanities (HU*) | | | 3 |
| Humanities (HU*) | ENEE/ENES 200 | | 3 |
| Natural Sciences No Lab (NS) | PHYS 161 | | 3 |
| Natural Sciences w/Lab (NL) | PHYS 260/261 | | 4 |
| Scholarship in Practice (SP*) in major | ENES 100 | | 3 |
| Scholarship in Practice (SP*) out of major | | | 3 |
| Big Question Courses | | | |
| Big Question (SCIS*) | ENEE/ENES 200 | | 0 |
| Big Question (SCIS*) | | | 3 |
| Diversity | | | |
| Understanding Plural Societies (UP*) | | | 3 |
| Understanding Plural Societies (UP*) OR | | | 3 |
| Cultural Competency (CC*) | | | |
| MAJOR REQUIREMENTS | | | |
| Basic Sciences | | | |
| CHEM 135-Chem Engr or 131 & 134 -Fund & Prin | | | 3/3&1 |
| PHYS 161 - General Physics I (NS) | | | 0 |
| PHYS 260 and PHYS 261 - Gen Physics II & Lab (NL) | | | 0 |
| PHYS 270 and PHYS 271 - Gen Physics III & Lab | | | 3 & 1 |
| MATH 140 - Calculus I (MA/AR) | | | 0 |
| MATH 141 - Calculus II | | | 4 |
| MATH 240 or MATH 461 - Linear Algebra | | | 4 or 3 |
| MATH 241 - Calculus III | | | 4 |
| MATH 246 - Differential Equations | | | 3 |
| Engineering Sciences | | | |
| ENES 100 - Intro to Eng Design (SP) | | | 0 |
| ENES 102 - Mechanics I | | | 3 |
| ENES 220 - Mechanics II | | | 3 |
| ENES232 - Thermodynamics | | | 3 |

| MAJOR REQUIREMENTS | | |
|---|--|-------|
| ENAE 100 - Aerospace Eng Profession | | 1 |
| ENAE 200 - Aerospace Eng Profession II | | 1 |
| ENAE 202 - Aerospace Computing | | 3 |
| ENAE 283 - Intro to Aerospace Systems | | 3 |
| ENAE 301 - Dynamics of Aero Systems | | 3 |
| ENAE 311 - Aerodynamics I | | 3 |
| ENAE 324 - Aerospace Structures | | 4 |
| ENAE 362 - Aero Instrumentation & Exp. | | 3 |
| ENAE 380 - Flight Software Systems | | 3 |
| ENAE 423 - Vibration & Aeroelasticity | | 3 |
| ENAE 432 - Control of Aero. Systems | | 3 |
| ENAE 464 - Aerospace Eng Lab | | 3 |
| ENAE 4XX** or | | 3 |
| ENAE 398H - Honors Research** | | 1/1/1 |
| ENES 200 or ENEE 200- Tech & Consequences (HU/IS) | | 0 |
| Technical Requirements | | |
| Technical Elective - 4XX** | | 3 |

| Choose one of the following tracks: | | |
|---|--|---|
| Aeronautical Track: | | |
| ENAE 403 - Aircraft Flight Dynamics | | 3 |
| ENAE 414 - Aerodynamics II | | 3 |
| ENAE 455 - Aircraft Propulsion & Power | | 3 |
| ENAE 481 - Principles of Aircraft Design | | 3 |
| ENAE 482 - Aeronautical Systems Design | | 3 |
| Astronautical Track: | | |
| ENAE 404 - Space Flight Dynamics | | 3 |
| ENAE 441 - Space Navigation & Guidance | | 3 |
| ENAE 457 - Space Propulsion & Power | | 3 |
| ENAE 483 - Princ. of Space Systems Design | | 3 |
| ENAE 484 - Space Systems Design | | 3 |

| Requirements for Graduation: | |
|---|---|
| <input type="checkbox"/> | Final 30 credits must be earned at UMD |
| <input type="checkbox"/> | 15 of the final 30 credits must be earned at the 300-400 level |
| <input type="checkbox"/> | 12 of the final 30 credits must be upper level major coursework |
| <input type="checkbox"/> | A minimum 2.00 cumulative UM GPA and satisfactory completion of all degree requirements are required for graduation |
| <input type="checkbox"/> | Students matriculating after Fall 2012 must have a 2.0 minimum GPA for all major requirements, minor requirements, and undergraduate certificate requirements |
| <i>(Major courses are defined as: departmental courses, basic sciences, engineering sciences, specified degree tracks, technical requirements/ electives and Professional Writing (PW))</i> | |
| <input type="checkbox"/> | A minimum of 124 credits is required to earn the degree |

* May satisfy more than one requirement. See www.gened.umd.edu
 **See Aerospace Advisor for appropriate electives: www.aero.umd.edu

Aerospace Engineering Graduation Plan

Name: _____

UID: _____

| Year 1 | Fall | | |
|--|---------------|--------|-----------|
| | Course | Credit | Grade |
| Current Engineering Students: https://eng.umd.edu/services/academic-policies Prospective Engineering Students: https://lep.umd.edu/ | ENAE 100 | 1 | |
| | ENES 100 (SP) | 3 | |
| | MATH 140 (AR) | 4 | |
| | CHEM 135 | 3 | |
| | ENGL 101 (AW) | 3 | |
| | Total | | 14 |

| Spring | | | |
|--------|----------------|-----------|-------|
| | Course | Credit | Grade |
| | ENAE 202 | 3 | |
| | ENES 102 | 3 | |
| | MATH 141 | 4 | |
| | PHYS 161 (NS) | 3 | |
| | ORAL COMM (OC) | 3 | |
| | | | |
| | Total | 16 | |

| Year 2 | Fall | | |
|--------|----------------------------|-----------|-------|
| | Course | Credit | Grade |
| | ENES 220 | 3 | |
| | ENAE 283 | 3 | |
| | MATH 241 | 4 | |
| | PHYS 260 and PHYS 261 (NL) | 3 & 1 | |
| | ENES/ENEE 200 (HU/SCIS) | 3 | |
| | | | |
| | | | |
| | Total | 17 | |

| Spring | | | |
|--------|-----------------------------|-----------------|-------|
| | Course | Credit | Grade |
| | ENAE 200 | 1 | |
| | ENES 232 | 3 | |
| | MATH 240 or MATH 461 | 4 or 3 | |
| | MATH 246 | 3 | |
| | PHYS 270 and PHYS 271 | 3 & 1 | |
| | Hist & Social Sciences(HS)* | 3 | |
| | | | |
| | Total | 17 or 18 | |

| Year 3 | Fall | | |
|--------|-------------------------------|-----------|-------|
| | Course | Credit | Grade |
| | ENAE 301 | 3 | |
| | ENAE 311 or ENAE414** | 3 | |
| | ENAE 362 | 3 | |
| | ENAE 380 | 3 | |
| | Scholarship in Practice (SP)* | 3 | |
| | | | |
| | | | |
| | Total | 15 | |

| Spring | | | |
|--------|-----------------------------|-----------|-------|
| | Course | Credit | Grade |
| | ENAE 324 | 4 | |
| | ENAE 404 or ENAE 311*** | 3 | |
| | ENAE 432 | 3 | |
| | Professional Writing (PW) | 3 | |
| | Hist & Social Sciences(HS)* | 3 | |
| | | | |
| | | | |
| | Total | 16 | |

| Year 4 | Fall | | |
|--------|----------------------|-----------|-------|
| | Course | Credit | Grade |
| | ENAE 403 or ENAE 441 | 3 | |
| | ENAE 423 | 3 | |
| | ENAE 455 or ENAE 457 | 3 | |
| | ENAE 481 or ENAE 483 | 3 | |
| | Humanities (HU)* | 3 | |
| | | | |
| | | | |
| | Total | 15 | |

| Spring | | | |
|--------|----------------------|-----------|-------|
| | Course | Credit | Grade |
| | ENAE 464 | 3 | |
| | ENAE 482 or ENAE 484 | 3 | |
| | ENAE Elective | 3 | |
| | Technical Elective | 3 | |
| | Gen Ed/Elective‡ | 3 | |
| | | | |
| | | | |
| | Total | 15 | |

Plural Societies (UP) and Cultural Competence (CC) courses may also fulfill Distributive Studies categories.

**Select ENAE414 for Aero track, select ENAE311 for Astro track

***Select ENAE311 for Aero track, select ENAE404 for Astro track

‡Only necessary if student still needs to fulfill GenEd and/or needs to meet the 124 credit minimum.