# B.S. in Mechanical Engineering

## Propulsion Option

**Freshman Year**

| Fall | | Credits |
|---|---|---|
| COM 122 | English Composition | 3 |
| CHM 113 | General Chemistry for Engineering | 3 |
| EGR 101 | Introduction to Engineering | 2 |
| EGR 201 | Computer Aided Design of Mechanical Systems | 3 |
| MA 241 | Calculus and Analytical Geometry I | 4 |
| ME 200 | Machine Shop Laboratory | 1 |
| UNIV 101 | College Success | (1) |
| | **Credits Subtotal** | **16.0** |
| **Spring** | | |
| EC 225 | Engineering Economics | 3 |
| EGR 115 | Introduction to Computing for Engineers | 3 |
| | Humanities or Social Science Lower-Level or Upper-Level Elective | 3 |
| MA 242 | Calculus and Analytical Geometry II | 4 |
| PS 161 | Physics I & II for Engineers | 4 |
| | **Credits Subtotal** | **17.0** |

**Sophomore Year**

| Fall | | |
|---|---|---|
| COM 221 | Technical Report Writing (Must earn a C or better to pass COM 221) | 3 |
| ES 201 | Statics | 3 |
| ES 208 | Thermodynamics | 3 |
| MA 243 | Calculus and Analytical Geometry III | 4 |
| PS 250 | Physics for Engineers III | 3 |
| PS 253 | Physics Laboratory for Engineers | 1 |
| | **Credits Subtotal** | **17.0** |
| **Spring** | | |
| EE 335 | Electrical Engineering I | 2 |
| EE 336 | Electrical Engineering I Laboratory | 1 |
| ES 202 | Solid Mechanics | 3 |
| ES 206 | Fluid Mechanics | 3 |
| | Humanities Lower-Level Elective | 3 |
| MA 345 | Differential Equations and Matrix Methods | 4 |
| | **Credits Subtotal** | **16.0** |

**Junior Year**

| Fall | | |
|---|---|---|
| EE 334 | Electrical Engineering for Mechanical Engineers | 3 |
| ES 204 | Dynamics | 3 |
| ES 324 | Measurements and Instrumentation | 2 |
| ES 325 | Measurements and Instrumentation Lab | 1 |
| ES 403 | Heat Transfer | 3 |
| ME 309 | Airbreathing and Rocket Propulsion | 3 |
| | **Credits Subtotal** | **15.0** |
| **Spring** | | |
| AE 430 | Control System Analysis and Design | 3 |
| ES 320 | Engineering Materials Science | 2 |
| ES 321 | Engineering Materials Science Laboratory | 1 |
| | Math or Natural Science Upper-Level Elective | 3 |
| ME 403 | Thermal Power Systems | 3 |
| ME 446 | Thermal-Fluid Science and Energy Measurement | 1 |
| ME 446L | Thermal-Fluid Science and Energy Measurement Laboratory | 1 |
| | Propulsion Elective | 3 |
| | **Credits Subtotal** | **17.0** |

**Senior Year**

| Fall | | |
|---|---|---|
| COM 420 | Advanced Technical Communication I | 1 |
| ME 304 | Introduction to Machine Design | 3 |
| ME 305 | Machine Design Laboratory | 1 |
| | Preliminary Design | 4 |
| | Propulsion Elective | 3 |
| | Technical Elective | 3 |
| | **Credits Subtotal** | **15.0** |
| **Spring** | | |
| COM 430 | Advanced Technical Communication II | 2 |
| | Detail Design | 4 |
| HU 330 | Values and Ethics (or HU/SS Upper-Level Study Abroad) | 3 |
| or HU 335 | Technology and Modern Civilization | |
| ME 400 | Mechanical Vibrations | 3 |
| | Technical Elective | 3 |
| | **Credits Subtotal** | **15.0** |
| | **Credits Total:** | **128.0** |