# *Aerospace Electronics*

Bachelor of Science

The Aerospace Electronics degree program is designed to provide the requisite knowledge required to excel in the field of aerospace electronics in support of aerospace vehicles and systems. The general education requirements include mathematics, science, communications, and other applicable subjects. This balanced approach to education enables the graduate to apply techniques of critical thinking and problem-solving to a logical result in challenging situations. The primary focus of the degree program is entry positions in commercial off-the-shelf systems (COTS) development, test, and evaluation, and integrated logistics support (ILS) with aerospace electronics manufacturers, aircraft manufacturers, and related space industries.

## Admissions Requirements

Students entering this program should have a basic background in math, physics, and chemistry. College algebra and trigonometry are the entry-level math courses. Students wishing to strengthen their background in math and the basic sciences before enrolling in the prescribed courses should contact the department chair or the program coordinator for guidance.

Several courses in each academic year have prerequisites and/or corequisites. Check the course description section at the back of this catalog before registering for classes to ensure requisite sequencing.

## Degree Requirements

The Bachelor of Science in Aerospace Electronics requires successful completion of 120 credits as outlined in the following course list. A minimum cumulative grade point average of 2.00 is required of all aerospace electronics related courses.

### *Suggested Program of Study*

**FRESHMAN YEAR**

| Course | | Title | Credits |
|---|---|---|---|
| COM | 122 | English Composition and Literature | 3 |
| EGR | 111 | Engineering Drawing | 2 |
| EC | 200 | An Economic Survey | 3 |
| EL | 107 | Direct and Alternating Current Fundamentals and Circuit Analysis | 4 |
| EL | 108 | Direct and Alternating Current Laboratory | 1 |
| HU | | Lower-Level Humanities* | 3 |
| MA | 145 | College Algebra and Trigonometry | 5 |
| MA | 241 | Calculus and Analytic Geometry | 4 |
| PS | 101 | Basic Chemistry | 3 |
| PS | 150 | Physics I for Engineers | 3 |
| **Total Credits** | | | **31** |

**SOPHOMORE YEAR**

| Course | | Title | Credits |
|---|---|---|---|
| EGR | 115 | Introduction to Computing for Engineers -OR- | |
| CS | 223 | Scientific Programming in C | 3 |
| EL | 203 | Microelectronics Fundamentals and Circuit Analysis | 4 |
| EL | 204 | Microelectronics Laboratory | 1 |
| EL | 212 | Digital Circuit Systems Analysis | 4 |
| EL | 213 | Digital Circuits Laboratory | 1 |
| EL | 307 | Microprocessor Systems | 3 |
| EL | 308 | Microprocessor Systems Laboratory | 1 |
| MA | 242 | Calculus and Analytic Geometry | 4 |
| MA | 245 | Applied Differential Equations | 3 |
| PS | 160 | Physics II for Engineers | 3 |
| PS | 250 | Physics III for Engineers | 3 |
| PS | 253 | Physics Laboratory for Engineers | 1 |
| **Total Credits** | | | **31** |

# Academic Programs at the Daytona Beach Campus

**JUNIOR YEAR**

| Course | Title | Credits |
|---|---|---|
| AEL 315 | Linear Systems and Signals Analysis | 3 |
| AEL 316 | Elements of Engineering Design and Laboratory Procedures | 3 |
| AEL 321 | Advanced Communications Systems Analysis | 4 |
| AEL 322 | Advanced Communications, Microwave and Control Laboratory Systems Analysis | 1 |
| AEL 323 | Applied Control System Analysis | 2 |
| AEL 324 | Microwave, and Radar System Analysis | 2 |
| COM 219 | Speech | 3 |
| COM 221 | Technical Report Writing | 3 |
| HF 210 | Human Factors I: Principles and Fundamentals | 3 |
| HU/SS | Upper-Level Elective | 3 |
| MET 200 | Machine Shop Laboratory | 1 |
| PSY 101 | Introduction to Psychology | 3 |
| **Total Credits** | | **31** |

**SENIOR YEAR**

| Course | Title | Credits |
|---|---|---|
| | Open Elective (Upper Level) | 3 |
| AEL 411 | Communications and Navigation Systems | 3 |
| AEL 412 | Surveillance and Control Systems | 3 |
| AEL 413 | Satellite Communications and Navigation Systems | 4 |
| AEL 414 | System Test Evaluation Laboratory | 1 |
| AEL 421 | Aerospace Electronic System Integration and Design | 3 |
| AEL 422 | Integrated Logistics Support | 3 |
| AEL 423 | Test System Development Laboratory | 1 |
| AEL 424 | Senior Project | 3 |
| MA 412 | Probability and Statistics | 3 |
| **Total Credits** | | **27** |
| **TOTAL DEGREE CREDITS** | | **120** |

* HUMANITIES:
HU: 140, 141, 142, 143, 144, 145, 146