

B.S. in Aerospace Physiology

While studying Aerospace Physiology at the **Daytona Beach Campus**, students analyze the body's response to extreme environments, such as space and the upper atmosphere. Through applied research and hands-on projects, they examine how these environments affect biological systems, including the impacts of microgravity and radiation on the human body. Students also collaborate with engineers and industry experts in space and aviation to contribute to advancements in the aerospace industry.

Courses are taught by experienced instructors who have worked in the field of aerospace medicine, providing a comprehensive education covering data analysis, human factors in aviation, molecular and cellular biology, and more. The program includes opportunities to participate in clinical rotations alongside medical school residents, allowing students to gain firsthand experience with innovative treatment techniques and access to the latest research.

Program-Level Student Learning Outcomes

Students will:

- Apply principles of biological sciences to aerospace physiology.
- Correlate fundamental scientific instrumentation with aerospace physiology.
- Employ critical thinking skills and scientific best practices in research design and experimentation.
- Analyze current research in aerospace physiology related to treatment interventions.
- Complete projects arising from sound research practices.

Daytona Beach Program Requirements

General Education Requirements	36
Core Requirements	54
Specified Electives	15-16
Open Electives	15
Total Credits	120-121

General Education Requirements

Communication	9
COMM 122 English Composition	
COMM 219 Speech	
COMM 221 Technical Communication	
Humanities - Lower Level	3
Social Sciences - Lower Level	3
Humanities/Social Sciences - Lower or Upper Level	3
Humanities/Social Sciences - Upper Level	3
Computer Science/Information Technology	3
CPSC 118 Fundamentals of Computer Programming	
or CPSC 223Scientific Programming in C	
or ENGR 119Introduction to Computing for Engineers	
or CYBR 235Computer and Network Technologies	
Mathematics	6
MATH 210 Introduction to Data Science	
Physical/Life Sciences	6
BIOL 120 Foundations of Biology I	
CHEM 110 General Chemistry I	
Total Credits	36

Core Requirements

BIOL 110	Research Methods	1
BIOL 111	Research Symposium	1
BIOL 120L	Foundations of Biology I Laboratory	1
BIOL 121	Foundations of Biology II	3
BIOL 121L	Foundations of Biology II Laboratory	1
BIOL 215	Genetics	3
BIOL 215L	Genetics Laboratory	1
BIOL 305	Human Anatomy and Physiology I	3
BIOL 305L	Human Anatomy and Physiology Laboratory	1
BIOL 306	Human Anatomy and Physiology II	3
BIOL 306L	Human Anatomy and Physiology II Laboratory	1
BIOL 405	Molecular and Cell Biology	3
BIOL 405L	Molecular and Cell Biology Laboratory	1
BIOL 450	Exercise Physiology and Human Performance	3
CHEM 110L	General Chemistry I Laboratory	1
CHEM 111	General Chemistry II	3
CHEM 111L	General Chemistry II Laboratory	1
CHEM 210	Organic Chemistry I	3
CHEM 210L	Organic Chemistry I Laboratory	1
CHEM 211	Organic Chemistry II	3
CHEM 211L	Organic Chemistry II Laboratory	1
HFCT 440	Aerospace Physiology	3
PHYS 113	Introductory Physics I	3
PHYS 113L	Introductory Physics I Laboratory	1
PHYS 117	Introductory Physics II	3
PHYS 117L	Introductory Physics II Laboratory	1
STAT 222	Business Statistics	3
UNIV 101	College Success	1
Total Credits		54

Specified Electives

Select 15-16 Credits from the Following:		
BIOL 216	Microbiology	3
BIOL 216L	Microbiology Laboratory	1
BIOL 299	Special Topics in Biology	3
BIOL 321	Behavioral Neuroscience I	3
BIOL 322	Behavioral Neuroscience II	3
BIOL 335	Cell Signaling and Disease	3
BIOL 399	Special Topics in Biology	3
BIOL 430	Fundamentals of Infectious Diseases	3
BIOL 440	Clinical Rotation	3
BIOL 441	Clinical Rotation II: Advanced Practice	3
BIOL 444	Immunology	3
BIOL 499	Special Topics in Biology	3
CHEM 211	Organic Chemistry II	3
or CHEM 310	Biochemistry	
CHEM 211L	Organic Chemistry II Laboratory	1
or CHEM 310L	Biochemistry Laboratory	
ESCI 315	Space Environment and Effects	3
HFCT 300	Human Factors Principles and Fundamentals	3
HFCT 312	Ergonomics and Bioengineering	3
HFCT 321	Psychopharmacology	3
HFCT 399	Special Topics in Human Factors	3
HFCT 499	Special Topics in Human Factors	3
PSYC 101	Introduction to Psychology	3
Total Credits		15-16

Open Electives

Open Electives - Lower or Upper Level	5
Open Electives - Upper Level	10
Total Credits	15

Suggested Plan of Study

Year One

Requirements	Credits
COMM 122 - English Composition	3
UNIV 101 - College Success	1
MATH 120 - Applied College Algebra	3
CHEM 110 - General Chemistry I	3
CHEM 110L - General Chemistry I Laboratory	1
BIOL 120 - Foundations of Biology I	3
BIOL 120L - Foundations of Biology I Laboratory	1
BIOL 110 - Research Methods	1
Semester Hours	16

Requirements	Credits
Humanities - Lower Level (140 Serices)	3
PSYC 101 - Introduction to Psychology	3
CHEM 111 - General Chemistry II	3
CHEM 111L - General Chemistry II Laboratory	1
BIOL 121 - Foundations of Biology II	3
BIOL 121L - Foundations of Biology II Laboratory	1
BIOL 111 - Research Symposium	1
Semester Hours	15

Total Credits

Total Hours for All Requirements: 31

Year Two

Requirements	Credits
COMM 219 - Speech	3
CHEM 210 - Organic Chemistry I	3
CHEM 210L - Organic Chemistry I Laboratory	1
BIOL 215 - Genetics	3
BIOL 215L - Genetics Laboratory	1
BIOL 305 - Human Anatomy and Physiology I	3
BIOL 305L - Human Anatomy and Physiology Laboratory	1
Semester Hours	15

Requirements	Credits
COMM 221 - Technical Communication	3
CHEM 211 - Organic Chemistry II	3
CHEM 211L - Organic Chemistry II Laboratory	1
BIOL 306 - Human Anatomy and Physiology II	3

BIOL 306L - Human Anatomy and Physiology II Laboratory	1
Open Elective - Lower or Upper Level	3
Semester Hours	14

Total Credits

Total Hours for All Requirements: 29

Year Three

Requirements	Credits
MATH 210 - Introduction to Data Science	3
PHYS 113 - Introductory Physics I	3
PHYS 113L - Introductory Physics I Laboratory	1
Specified Elective	3
Specified Elective	3
Open Elective - Lower or Upper Level	2
Semester Hours	15

Requirements	Credits
HFCT 440 - Aerospace Physiology	3
STAT 222 - Business Statistics	3
PHYS 117 - Introductory Physics II	3
PHYS 117L - Introductory Physics II Laboratory	1
Specified Elective	3
Specified Elective	3
Semester Hours	16

Total Credits

Total Hours for All Requirements: 31

Year Four

Requirements	Credits
BIOL 405 - Molecular and Cell Biology	3
BIOL 405L - Molecular and Cell Biology Laboratory	1
BIOL 450 - Exercise Physiology and Human Performance	3
HFCT 300 - Principles and Fundamentals	3
Humanities/Social Science Lower or Upper Level	3
Open Elective - Upper Level	3
Semester Hours	16

Requirements	Credits
CPSC 118 - Fundamentals of Computer Programming	3
Specified Elective	3
Open Elective - Upper Level	3
Open Elective - Upper Level	4
Semester Hours	13

Total Credits

Total Hours for All Requirements: 29