

B.S. in Human Factors Psychology

The field of Human Factors, rooted in understanding the interaction between humans and other system components, is becoming increasingly vital in our technology-driven world. With applications spanning across industries and disciplines, the relevance of an undergraduate program in this domain has never been more pronounced. This program helps ensure that future professionals are equipped with the necessary skills and knowledge to innovate and improve human-system interactions.

Human Factors Psychology is a unique area of psychology aimed toward the abilities and limitations of humans to sense, store and process information, and act. This knowledge is used to guide decisions for the design, use, maintenance and improvement of systems that rely on human interactions. This complete human factors cycle approach focuses on the fact that a broad range of professional areas benefit from human factors psychology, for example including: artificial intelligence; aviation; ergonomics, human systems integration, safety, simulation, and robotics.

The program includes an applied practicum or research experience. This requirement can be met in several ways, including co-ops, internships or working on a virtual Worldwide Campus research team. Coordinated through the Worldwide Campus COIN program, students will be provided opportunities to gain practical experience in real-world settings to increase career/career progression readiness upon graduation.

Students successfully completing the B.S. in Human Factors Psychology program will have a deep understanding and expertise in the human-centered aspects of system design and operation. In particular, graduates from the program will:

- Have a robust foundation in the principles and practices of Human Factors.
- Have the critical thinking and problem-solving skills pertinent to human-system interactions.
- Be ready to meet the challenges of designing, evaluating, and implementing user-centered systems in various industries.

Estimated Cost of Attendance

Students will:

- Describe the basic characteristics of human anatomy, physiology, sensation, and perception, with emphasis on vision, audition, and vestibular systems.
- Describe the basic characteristics and limitations of human memory and cognition.
- Relate basic ergonomic and bioengineering factors to human-machine system design and performance.
- Critically evaluate scientific research.
- Interpret basic applied statistical analyses for the behavioral sciences.
- Apply basic experimental designs for the behavioral sciences.
- Apply human factors psychology principles to human-machine system performance in various domains.
- Apply human-machine system analysis and design methodologies across various domains.
- Function effectively in human factors and ergonomics team projects and demonstrate professional communication skills.

DEGREE REQUIREMENTS

General Education

General Education

Embry-Riddle courses in the general education categories of Communication Theory and Skills, Humanities, Social Sciences, Physical and Life Science, Mathematics, and Computer Science may be chosen from as listed, assuming prerequisites are met. Courses from other institutions are acceptable if they fall into these broad categories and are at the level specified.

Communication Theory and Skills	9
Computer Science/Information Technology	3
Mathematics	6
Physical and Life Sciences (Natural Sciences)	6
Humanities and Social Sciences	12
Lower-Level Humanities	
Lower-Level Social Science	
Lower-Level or Upper-Level Humanities or Social Science	
Upper-Level Humanities or Social Science	
Total Credits	36

Core/Major

Human Factors Core

BSHF 300	Human Factors I: Principles and Fundamentals	3
BSHF 302	Human Factors II: Analytic Methods and Techniques	3
BSHF 306	Human Factors III: Performance Processes	3
Culminating Experience (Select One):		3
BSHF 401	Applied Research	
BSHF 480	Human Factors Capstone	
COIN 496	Co-Operative Education	
Total Credits		12

Additional Core (Program Support)

RSCH 202	Introduction to Research Methods	3
STAT 211	Statistics with Aviation Applications	3
BSHF 414	Sensation and Perception	3
BSHF 420	Memory and Cognition	3
Total Credits		12

Program Specialization

Choose two specializations

Electives

Specified Electives

COMD 225	Science and Technology Communication	3
COMD 322	Aviation and Aerospace Communication	3
COMD 335	Technology and Modern Civilization	3
HUMN 330	Values and Ethics	3
or MGMT 201	Principles of Management	
RSCH 350	Research Ethics	3
or SOCI 210	Introduction to Sociology	
SOCI 499	Special Topics/Social Science	3
Total Credits		18

Open Electives	6
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Total Degree Requirements	120
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Program Specializations:**Psychological Foundations of Human Factors**

PSYC 220	Introduction to Psychology	3
Select 5 courses from the following:		15
PSYC 320	Aviation Psychology	
PSYC 326	Group and Team Behavior	
PSYC 340	Industrial/Organizational Psychology	
PSYC 350	Social Psychology	
PSYC 355	The Psychology of Creativity and Innovation	
PSYC 360	Cultural Psychology	
PSYC 400	Introduction to Cognitive Science	
PSYC 440	The Psychology of Resilience	
Total Credits		18

Homeland Security and Emergency Management

HLSL 110	Introduction to Homeland Security	3
EMGY 310	Fundamentals of Emergency Management	3
HLSL 280	Professional Skills in Homeland Security	3
Select 3 of the following:		9
EMGY 400	Introduction to Incident Command System	
BSAS 350	Aircraft Crash and Emergency Management	
HLSL 360	Strategic Planning and Decision Making in Homeland Security	
HLSL 315	Critical Infrastructure Security, Resilience, and Risk Analysis	
HLSL 215	Introduction to Industrial Security	
HLSL 405	Emergent Topics in Homeland Security	
HLSL 155	Foundations of Information Security	
ESVS 201	Fire-Related Human Behavior	
ESVS 301	Community Risk Reduction for the Fire and Emergency Services	
ESVS 405	Personnel Management for Fire and Emergency Services	
ESVS 400	Analytical Approaches to Public Fire Protection	
Total Credits		18

Safety

Select 6 of the following:		18
SFTY 201	Introduction to Occupational Safety and Health	
SFTY 205	Principles of Accident Investigation	
SFTY 311	Fundamentals of Occupational Safety and Health	
BSAS 320	Human Factors in Aviation Safety	
SFTY 321	Ergonomics	
SFTY 326	System Safety	
SFTY 341	Occupational Safety and Health Program Management	
SFTY 415	Human Reliability and Safety Analysis	
SFTY 421	Ergonomics II	
Total Credits		18

Organizational Behavior and Leadership

OBLD 275	Critical Thinking for Leadership	3
Select 3 of the following:		15
OBLD 300	Emotional, Social, and Cognitive Intelligence	
OBLD 304	Coaching and Mentoring	
OBLD 310	Mediation, Negotiation, and Conflict Resolution	
OBLD 315	Contemporary Leadership Theories	
OBLD 317	Organizational Behavior	

OBLD 371	Leadership
OBLD 407	Driving Change in Organizations
OBLD 427	Management of the Multicultural Workforce

Total Credits **18**

PC BSHFP-WW MSHF 4+1 Combined Program: Accelerated opportunity to earn an MSHF Degree from the Worldwide Campus

This program is for students who are committed to continuing their education through the Master's degree. This fast-paced program allows qualifying students the opportunity to complete both the Bachelor of Science in Human Factors Psychology from the Prescott Campus (PC BSHFP) and the Master of Science in Human Factors from the Worldwide Campus (WW MSHF) in five academic years.

Students who are accepted in the PC BSHFP-WW MSHF 4+1 combined program, will spend three academic years in undergraduate-level study and then, during their senior year, will be allowed to take up to three graduate-level courses from the WW MSHF to replace an equal number of elective courses in the PC BSHFP degree. Before selecting the three courses to be taken, students must confer with an advisor to ensure that the courses selected are suitable (a grade of B or better must be achieved). Upon completion of the PC BSHFP requirements, students will be enrolled in the WW MSHF and can complete their degree in approximately one year. In any graduate course taken by an undergraduate student, a grade of B or better must be earned. If a grade of C or F is earned in any of the courses taken in lieu of the elective courses in the PC BSHFP degree, the student will be removed from the program, have credit awarded to the PC BSHFP degree only, and may continue to complete the PC BSHFP degree.

As a minimum, the applicant must have at least a 3.00 GPA. Students initiate program acceptance through their Academic Advisor or Campus Advisor; to help ensure program criteria are met. Student Advisor will complete the request for processing into the 4+1 program.