

HUMAN FACTORS, CERTIFICATE

Requirements for an undergraduate certificate may be completed at any campus location offering the specified courses for the certificate.

Program Description

This 15 credit interdisciplinary certificate program is designed to prepare students with in-depth knowledge of the capabilities and limitations of people and the application of psychological concepts to the design and safety of products and services; including consumer goods, military products, interactive websites and games, and assistive technologies. This certificate requires that students take introductory psychology as well as the two human factors courses (9 credits). Students will also need to take one additional psychology course (3 credits), and one course (3 credits) outside of their major of study in order to foster the interdisciplinary nature of this certificate.

What are Human Factors?

Can we make car crashes less likely by redesigning the dashboard or changing the pedal location? That's a typical question in human factors psychology. By using knowledge of humans' physical and cognitive abilities and limitations, human factors psychologists work to improve organizations, jobs, machines, tools, and consumer products for safe, efficient, and comfortable human use. Human factors draws on many academic disciplines, including psychology, engineering, biomechanics, computer science, and industrial design.

You Might Like This Program If...

- You think about the ways that everyday objects could be improved.
- You are interested in people, technology, and machines.
- You like watching people.
- You enjoy the challenge of learning new technologies.
- You want to make the workplace safer.
- You are majoring in psychology or an engineering discipline.

Entrance to Certificate

Completion of prerequisites for the required courses

Program Requirements

To earn an undergraduate certificate in Human Factors, a minimum of 15 credits is required.

Code	Title	Credits
Prescribed Courses		
PSYCH 100	Introductory Psychology	3
PSYCH 244	Introduction to the Psychology of Human Factors Engineering	3
PSYCH 444	Engineering Psychology	3
Additional Courses		
PSYCH 253 or PSYCH 256	Introduction to Psychology of Perception Introduction to Cognitive Psychology	3
Select one of the following: ¹		3
EDSGN 100	Cornerstone Engineering Design	
PSYCH 221	Introduction to Social Psychology	

SOC 5	Social Problems
STS 200	Critical Issues in Science, Technology, and Society
STS/PHIL 233	Ethics and the Design of Technology

¹ This course must be outside the student's major field of study.

Certificate Learning Objectives

- **Personal and Societal Problems:** Describe how psychological science can be applied to personal and societal problems.
- **Human-Machine Relationship:** Identify how psychology theory and research in cognitive, sensation & perception, social, motivation & emotion, and experimental psychology can be used to understand the human-machine relationship.
- **Interactions Between Technology and Society:** Appraise the interactions between technology and society.
- **Design of Products:** Apply human factors psychology theories and research to the design of products.

Academic Advising

The objectives of the university's academic advising program are to help advisees identify and achieve their academic goals, to promote their intellectual discovery, and to encourage students to take advantage of both in-and out-of class educational opportunities in order that they become self-directed learners and decision makers.

Both advisers and advisees share responsibility for making the advising relationship succeed. By encouraging their advisees to become engaged in their education, to meet their educational goals, and to develop the habit of learning, advisers assume a significant educational role. The advisee's unit of enrollment will provide each advisee with a primary academic adviser, the information needed to plan the chosen program of study, and referrals to other specialized resources.

READ SENATE POLICY 32-00: ADVISING POLICY (<https://senate.psu.edu/policies-and-rules-for-undergraduate-students/32-00-advising-policy/>)

Erie

Lisa Jo Elliott, Ph.D.

Assistant Teaching Professor, Psychology

101 Turnbull

Erie, PA 16563

814-898-6952

lje12@psu.edu

Career Paths

The certificate in Human Factors can be pursued by students in most Penn State Behrend degree programs. Penn State Behrend has a comprehensive support system to help you identify and achieve your goals for college and beyond. Meet with your academic adviser often and take advantage of the services offered by the Academic and Career Planning Center beginning in your first semester.

Careers

Psychologists and engineers with human factors expertise work in every organization where design, safety, and reliability are important issues. They improve the comfort, function, and convenience of consumer products. They design work tools and work spaces to optimize flow, productivity, and employee safety. They improve the user experience in

everything from health care and transportation to interactive gaming and military supply.

MORE INFORMATION ABOUT POTENTIAL CAREER OPTIONS FOR GRADUATES WITH A CERTIFICATE IN HUMAN FACTORS (<https://behrend.psu.edu/school-of-humanities-social-sciences/academic-programs-1/certificate-programs/human-factors-certificate/>)

Opportunities for Graduate Studies

A graduate program in human factors offers you the opportunity to specialize in a field such as cognitive engineering, human-machine design systems, motor learning, the psychology of human-technology interaction, applied cognition, and applied research.

MORE INFORMATION ABOUT OPPORTUNITIES FOR GRADUATE STUDIES (<https://behrend.psu.edu/school-of-humanities-social-sciences/academic-programs-1/certificate-programs/human-factors-certificate/>)

Professional Resources

- Human Factors and Ergonomics Society (<https://www.hfes.org/>)
- American Psychological Association Division 21 Applied Experimental and Engineering Psychology (<https://www.apa.org/about/division/div21/>)
- Association for Computing Machinery SIGCHI (<https://sigchi.org/>)
- User Experience Professionals Association (<https://uxpa.org/>)

Contact

Erie

SCHOOL OF HUMANITIES AND SOCIAL SCIENCES
170 Irvin Kochel Center
Erie, PA 16563
814-898-6108
HSSOffice@psu.edu

<https://behrend.psu.edu/school-of-humanities-social-sciences> (<https://behrend.psu.edu/school-of-humanities-social-sciences/>)