

Certifications

Beyond attaining Professional Engineering licensure, Human Factors Engineers can apply for a variety of additional professional certifications, which attest to the attainment of a body of knowledge and capability specific to the discipline. In the field of behavioral transportation safety, the Transportation Professional Certification Board (TPCB) has developed the Road Safety Professional Certification to recognize the attainment of a given level of practice and knowledge in road safety science.

Year 5-8

Master's or Doctoral Degree in Industrial or Human Factors Engineering

Years 6-8: Students complete electives and required research thesis or dissertation requirements for the degree.

Year 5: Students complete core and elective courses within their concentration while selecting specialized independent research activities.

Core Human Factors Courses
 Human Factors Systems Design
 Human Factors Research Design
 Cognitive Psychology
 Usability Engineering
 Human Machine Interactions

Interdisciplinary Research Methods
 Statistics: Experimental Design & Analysis; Regression Analysis
 Psychology: Cognitive Psychology, Research Methods, Behavior Management
 Human Factors: Research Methods

Core Transportation Courses
 Transportation Safety
 Transportation Systems Planning
 Traffic Flow Modeling

Experiential learning includes research/lab work, design work, fieldwork

Year 3-4

Bachelor's Degree in Industrial or Human Factors Engineering

Year 4: Students may select electives in specific areas of interest and will fulfill internship, fieldwork, or senior capstone requirements. Core courses may include human factors design labs, human machine/human computer interactions, and systems or product design.

Year 3: Students take courses in different areas of Human Factors Eng., including experimental design, engineering statistics, mechanics, engineering psychology, and user-centered design.

GE Courses
 Science, Social Sciences, Humanities, Arts & Foundational Core Courses

Transportation Safety-Related Courses
 Transportation Safety
 Risk Assessment

Human Factors Courses
 Design & Analysis of Info Systems
 Systems Modeling & Simulation
 Human-Centered Systems Design
 Engineering Psychology
 Computational Methods

Experiential learning includes design courses, labs, internships & research

Year 1-2

Bachelor's Degree in Progress or Associate's Transfer Degree in Pre-Engineering

Year 1 and 2: Course requirements vary by institution. Students wishing to transfer into a 4-year degree program from a two-year Associate's degree should work with an advisor early on to ensure they take all pre-requisite courses for their intended major.

General Education Courses
 Students will develop writing, communication, math, and critical thinking skills.

HF-Related Courses
 Mechanics, Statistics, Psychology
 Computer Technology/Programming

Transfer Program Prerequisites
 Calculus & Differential Equations
 Probability and Statistics
 Chemistry
 Applied Mechanics & Dynamics
 Computer Programming

Experiential learning includes design labs/courses, internships, co-ops

Year 0

High School Diploma or G.E.D.

Engineering or Computer Science CTE coursework if available.