



Certifications

Beyond attaining Professional Engineering licensure, Civil Engineers can apply for a variety of additional professional certifications from the Transportation Professional Certification Board (TPCB), which attest to the attainment of a body of knowledge and capability specific to transportation. In the field of transportation safety, the 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 5-6



Master's Degree in Civil or Transportation Engineering

Year 6: Students complete electives and required research thesis or professional paper requirements for the degree.

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

Core Transportation Courses

Traffic Flow Fundamentals
Transportation Systems Planning
Traffic Engineering & ITS

Research Methods Courses

Regression Analysis
Experimental Design and Analysis
Human Factors Research Design

Safety Courses

Transportation Risk & Security
Transportation Safety
Adv. Geometric Design & Hwy Safety

Experiential learning includes planning studios / labs, internship, and fieldwork

Year 3-4



Bachelor's Degree in Civil Engineering

Year 4: Students select electives in specific areas of interest and fulfill internship, fieldwork, or senior capstone requirements. Core transportation courses include roadway design, traffic engineering, transportation planning.

Year 3: Students take basic courses in different areas of the Civil Engineering, to include hydrology, geotechnical, structural, transportation engineering.

GE Courses

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

Transportation-Related Courses

Roadway Design
Traffic Engineering and ITS
Transportation Planning
Transit System Design

Safety-Related Courses

Transportation Safety
Construction Safety
Safety Management
Risk Assessment
Senior Capstone
Internship

Experiential learning includes design courses, labs, internships, & research

Year 1-2



Associate Degree in Civil Engineering Technology

Year 1 and 2: Course requirements vary by institution. Students will complete institutional requirements for the degree sought. The associate degree will provide students with general education requirements as well as basic theoretical knowledge and practical skills in the chosen field. Students wishing to transfer into a 4-year degree program 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.

Transportation-Related Courses

AutoCAD/Engineering Graphics
Surveying
Technical Reporting
Mechanics, GIS
Materials & Testing

Safety-Related Courses

Construction Safety

Transfer Program Prerequisites

Calculus
Chemistry I, II
Physics I, II
Applied Mechanics

Experiential learning includes labs, internships, co-ops, and fieldwork

Year 0



High School Diploma or G.E.D.

Construction or Engineering CTE coursework if available.