Program of Study: Safety Data Analysis

NNTW
National Network for the
Transportation Workforce

Certifications

The Transportation Professional Certification Board (TPCB) offers a Road Safety Professional Certification, which attests to the attainment of a specific level of capability related to transportation safety science knowledge and practice.

Year 5-8

Master's or Doctoral Degree Computer Science, Math/Statistics or Data Science

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 Courses
Computational Science
Data Mining
Data Analysis
Mathematical Modeling & Simulation
Graphics and Data Visualization

Core Transportation Courses
Transportation Safety
Traffic Simulation & Modeling

Interdisciplinary Research Methods
Experimental Design & Analysis
Naturalistic and Behavioral Data Analysis
Human Factors Research Methods

> Experiential learning includes research, applied analysis work

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Year 3-4

Bachelor's Degree in Computer Science, GIS, Math/Statistics or Data Science

Year 4: Students may select electives in specific areas of interest and will fulfill internship or capstone design project requirements. Core courses may include software engineering labs or other applied analysis projects.

Year 3: Students take multidisciplinary courses related to computer programming, database management, analytical methods, data visualization, and statistics.

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

Transportation Safety-Related Courses
Transportation Safety
Human Factors

Data Analytics Courses
Methods for Data Analysis
Experimental Design
Data Structures & Algorithms
Database Systems
Computational Methods

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

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Year 1-2

Bachelor's Degree in Progress or Associate's Transfer Degree in Data Science or Related

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.

Major Coursework
Information Systems
Database Management
Network and Security

Data Structures
Computer Programming
Probability and Statistics

> Experiential learning includes design projects, internships, co-ops

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Year 0

High School Diploma or G.E.D.

Computer Science CTE coursework if available.

U.S. Department of Transportation
Federal Highway Administration