

Year 3+



CPWS - Certified Public Works Supervisor; TPCB Road Safety Professional Certification



Bachelor's degree in Civil or Construction Engineering, Highway Maintenance Management or Related

Year 3 & 4: Curriculum is multi-disciplinary and taught through a safety lens. Training content focused on leadership and safety management.

Year 1 & 2: General education and prerequisite courses are taken in science and math to cement a strong technical background.

Core Courses

Transportation Safety
Asset Management
Budgeting and Finance
Pavements
Materials & Testing Methods
Project Planning and Scheduling

Safety Courses

Design Countermeasures for Safety
Safety Data Analysis
Safety Culture & Leadership
Systemic Safety
Low Cost Safety Countermeasures

Experiential learning includes labs, capstones, fieldwork, co-ops

Year 2+



Training/Certification and/or Associate's Degree - Highway Maintenance Safety Focus

Apprenticeship to Associate Degree/Associate Degree

To attain an Associate's degree, all students must take general education courses that develop basic communication, math, technical, and critical thinking skills, as well as degree-specific requirements. Course offerings related to highway construction and maintenance operations and degree requirements will vary by institution.

Completion of an Apprenticeship provides credit towards a degree at Regis-

tered Apprenticeship - College Consortium colleges.

On-the-Job Experience & Training

Progressively responsible on-the-job experience and training can be substituted for degree work to achieve career advancement.

Focused training content on highway maintenance safety includes:

Highway Maintenance Safety Courses

Introduction to Safety Culture
Understanding Human Factors
Overview of the Manual on Uniform Traffic Control Devices
Introduction to Safety Analysis
Maintenance Countermeasures for Safety
Work Zone Safety
Identification and Mitigation of Roadway Safety Hazards
Maintenance Countermeasures for Safety

Experiential learning includes fieldwork, capstone projects, Maintenance Academies

Year 1-2



Apprenticeship or Work-Based Learning

Year 2 Technician: Equipment operation and employee safety are emphasized. Training may involve simulators. Course topics are offered at an intermediate level. Certifications may be available.

Year 1 Trainee: Employees learn highway maintenance practices by working in the field. Coursework supplements the on-the-job portion and embeds certifications. Apprenticeship provides credits toward associate degree with

paid related instruction.

Highway Maintenance Safety Courses

Incident Management System
HAZMAT Awareness
Hazard Communication
Trenching & Shoring Awareness
Confined Space Entry
Defensive Driving
Personal Protective Equipment
Hand Tools and Equipment Operation
Promoting Workplace Safety

Safety Certifications

OSHA Certifications
First Aid/CPR Certification
Work Zone Traffic Certification
Work Zone Flagging Certification

Year 0



High School Diploma

Transportation/Public Works-related career academies.