Research to Practice: Infusing Road Safety Competencies into Multiple Career Pathways

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Two-Phase Development Process

Phase 1: Research

- Identify critical occupations that impact road safety.
- Identify core road safety competencies required across multiple transportation occupations.

Phase 2: Implementation

- Develop structured training series and learning outcomes based on research findings.
- Foster partnerships with training providers to implement training.







Phase I: Research Methodology

- Form Discipline Working Groups of Subject Matter Experts across multiple sectors
- Identify priority occupations impacting road safety and determine indemand skillsets
- Build competency models for different career paths
- Assess existing training & experiential learning programs & identify gaps
- Document an implementation plan to address needs











Competency Model: Transportation Planning, Engineering, Design & Analysis Career Pathway

| Core Safety Knowledge | Core Safety Skills |
|--|---|
| Understand road safety as a complex, interdisciplinary, multimodal discipline devoted to the avoidance and/or mitigation of fatalities injuries and crashes | Know how to identify and access different sources of local and federal data for safety analysis; as well as strengths and deficiencies in different data sets. |
| Understand the goals, process, and contributors to highway/road safety management. | Be able to interpret crash data and other safety-related data. |
| Understand and be able to communicate the comprehensive costs of transportation system crashes, injuries, and fatalities to society. | Be able to assess the different factors contributing to highway crashes, injuries, and fatalities and how crash contributing factors interact. |
| Understand how road user decision making, behaviors, and safety are influenced by the complex interactions of roadway design, transportation planning, traffic control devices and operations, communications technologies, vehicle design features, and the roadside environment. | Be able to assess the appropriateness of different analytical methods used for identifying safety problems and evaluating the effectiveness of safety countermeasures. |
| Understand the potential safety impacts of different roadway designs, particularly on vulnerable road users, and how demographic trends impact safety management outcomes. | Be able to use GIS or other spatial data analys and visualization tools to identify transportation safety issues. |
| Understand safety research and methods employed to achieve improvements in transportation safety. | Understand the myriad environmental, cultural, and other factors that influence behavior in order to develop an effective plan to promote behavior change and enhanced |

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tors that influence levelop an effective plan change and enhanced safety culture.



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Road Safety Career Pathway (Planning, Design, Operations & Analysis)



Implementation Plan: Road Safety Recognition Program

Key Challenges

Proposed Solutions

Lack of demonstrated demand for safety competencies from employers through incentives or other recognition mechanisms

Provide employers a mechanism to incentivize & recognize safety training completion

Lack of mechanism for organization-wide integration of road safety training across functional areas (safety is everyone's responsibility)

Provide a structured training pathway for employees across different occupational groups to gain safety competencies



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Phase II: Implementation

- Translate Phase I research findings/competency models into learning outcomes for a structured series of trainings.
- Develop training modules:
 - Core Modules (all disciplines)
 - Specialized modules based on occupational clusters/career paths
 - Planning and Engineering
 - Maintenance and Construction
 - Public Health
 - First Responders
- Pilot modules
- Develop partnerships to implement training



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Road Safety Champion Program (RSCP)

Take All Seven Core Modules* + Choose One of the Four Pathways* = Your Road Safety Champion Certificate!

*Courses may be taken in any order



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Core Modules

View Modules

- Introduction to Road Safety
- Understanding Human Factors
- Introduction to Traffic Safety Culture
- Overview of the MUTCD
- Intersection of Transportation with Public Health and Law Enforcement
- Reading the Roadway
- Safety Analysis Process

Planning & Engineering

View Courses

- Countermeasures for Road Safety
- Work Zones
- Overview of Local Road Safety Plans
- Overview of Data and Tools for Safety
- Crash Reporting
- Systemic Safety Project Selection Tool

Maintenance & Construction

View Courses

- Maintaining a Safer Roadway
- Work Zones
- Worker Safety
- Traffic Incident
 Management
- Take Action Now Maintaining Safety
- OSHA 10
- Flagger Certification



Key Take-Aways

- 1. Methodology & Process:
 - To determine cross-occupational and organization-wide competency development needs, especially in emerging fields (examples: Leveraging AI to improve organizational or operational efficiency; Integrating public health outcomes into transportation decision-making processes)
 - To translate competency models into training modules
 - To implement training through efficient leveraging of resources and partnerships
- 2. Outcome:
 - Nationally available RSCP training materials and online course offerings
 - 14+ LTAPs partner to deliver in-person RSCP training nationally
 - Low-cost opportunity for DOTs to incentivize and reward attainment of critical road safety competencies for priority occupations organization-wide



Your road to being a Champion starts here.

The Road Safety Champion Program (RSCP) is a nationally recognized certificate program designed to build a knowledgeable, safety minded workforce, responsible for operating, maintaining, and designing local roads.

Training participants complete a series of courses in core and specialized safety issues. When all requirements are met, participants will be awarded a Road Safety Champion Program Certificate¹.

Scan to learn more:





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Questions?

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We're here to help

The National Center for Rural Road Safety is a premier center of excellence for training, resources, technical assistance, and education on rural road safety issues.

