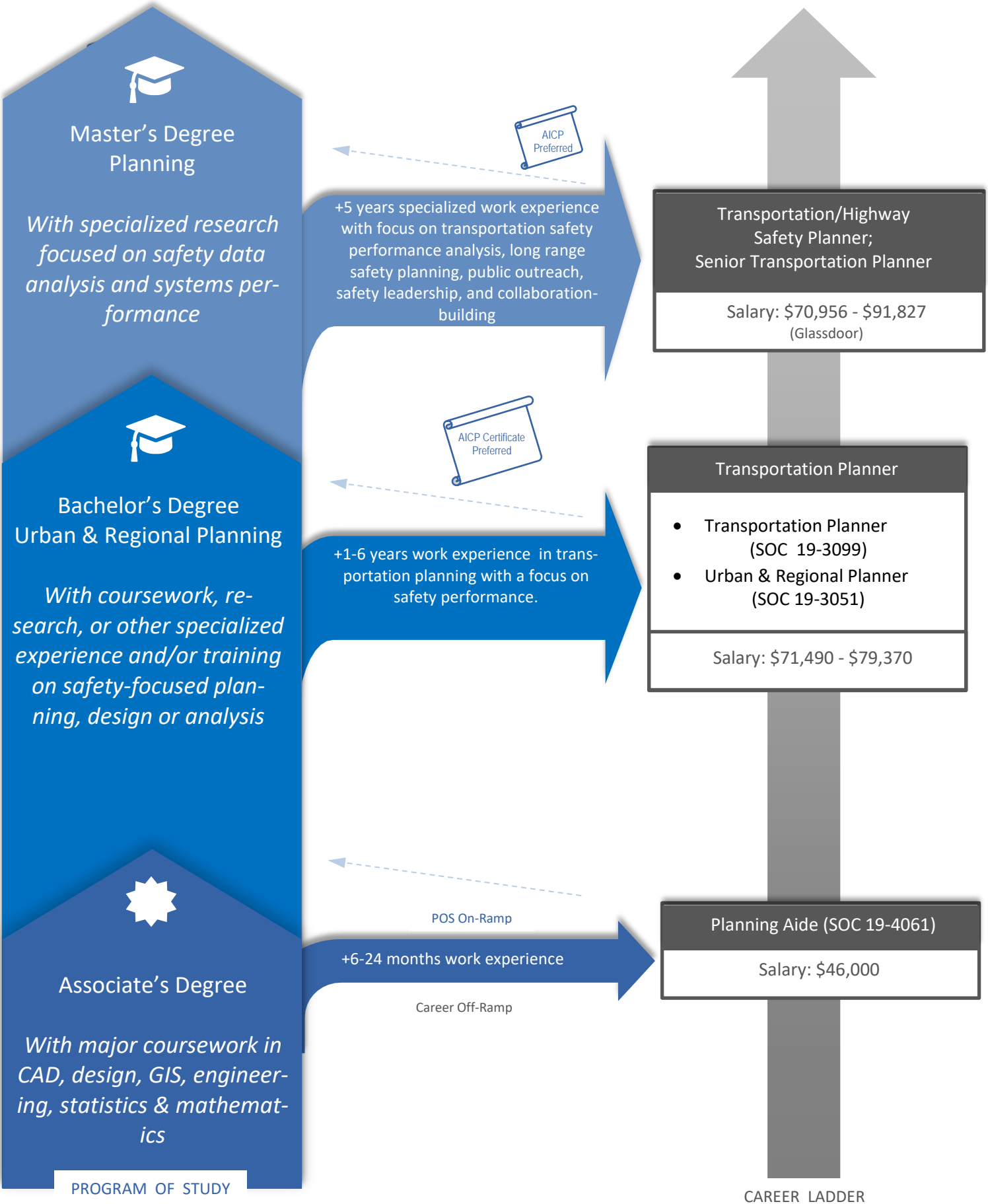


Transportation Safety Planning Career Pathway Documentation



Alternative Job Titles

Highway Safety Planner, Transportation Planner, Urban or Regional Planner

Job Description

A Transportation Safety Planner is responsible for integrating safety into an agency's planning documents and processes, and for working collaboratively with other stakeholders to implement safety plans. Safety planners must have knowledge of sources of safety data, systemic safety issues, contributing crash factors, and human behaviors associated with safety risk. They apply this knowledge to incorporate safety data and analysis into transportation decision-making processes to achieve safety improvement goals. Other duties include:

- Represent transportation safety interests at a variety of cross-sector stakeholder meetings.
- Analyze, synthesize, and present safety data to stakeholders and the public in visual or other formats that facilitate data-driven safety-related investments and decision-making.
- Provide direction on the development and integration of safety goals and objectives into transportation planning processes; and implement a process for embedding safety performance measures into planning tools and investment decisions.
- Promote effective public outreach, education and involvement to build support for safety priorities.
- Participate in public meetings and conduct surveys to identify issues of public concern.
- Implement monitoring and evaluation systems to ensure continuous improvement.

Knowledge Requirements

- Analysis/Research/Report Methods
- Regulation/Legislation/Organizational/Funding Policies, Goals & Practices related to Safety
- Principles of Road Safety
- Safety Program Management Practices
- Safety Performance and Mitigation Measures
- Statistical Theory/Methods
- Program Evaluation and Performance Assessment Techniques
- Budgeting and grants management; federal transportation funding processes & requirements

Required Skills & Abilities

- Analyze, interpret and present data
- Prepare Reports/Planning Documents
- Public Interaction
- Public Speaking
- Written and Oral Communication
- Prepare/Administer Budgets
- Strategic Mindset
- Management/Supervision
- Complex Problem Solving
- Leadership

Technical Skills Requirements

- GIS, SAS, or other data analysis and visualization tools
- Highway Safety Manual
- Microsoft Office Applications

Education & Work Experience

- Bachelor's degree accepted for some positions. An advanced graduate degree is preferred for most senior positions.
- Between 1-4 years of work experience commonly desired.
- A combination of education and work experience is generally acceptable.



Certifications

Transportation Planners can apply for certification from the American Institute of Certified Planners (AICP) after achieving work and education eligibility requirements. Safety Planners can also apply for Road Safety Professional Certification through the Transportation Professional Certification Board (TPCB). Both certifications are exam-based and serve to recognize the attainment of a given level of practice and knowledge.



Master's Degree in Urban and Regional Planning or Transportation Planning

Year 5-6

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

Methods of Transportation Planning
 Transportation Planning Process
 Transportation and Land Use
 Public Transportation Systems
 Alternative Transportation Modes
 Transportation Policy
 Transportation Demand Analysis
 Impact Assessment

Safety Courses

Transportation Safety
 Safety Data Analysis Methods
 Human Factors
 Behavioral Data Analysis
 Traffic Engineering

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



Bachelor's Degree in Urban and Regional Planning or Related

Year 3-4

Years 3-4: Students complete major coursework and may select electives in specific areas of interest. Core transportation courses may include transit system planning and transportation planning. Cross-disciplinary elective coursework, internship, fieldwork, or senior capstone requirements should focus on planning applications to transportation safety.

GE Courses

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

Transportation-Related Courses

Transportation Planning
 Transportation and Land Use
 Transit System Design

Safety-Related Courses

Transportation Safety
 Human Factors
 Safety Management
 Data Analysis Methods
 Senior Capstone
 Internship

Experiential learning includes planning studios, labs, internships, fieldwork



Associate's Degree in Geography, GIS, or Related

Year 1-2

Year 1 and 2: Course requirements vary by institution. Students will complete institutional requirements for the degree sought. The Associate's 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.

Core/Transfer Courses

Human Geography
 Statistics
 Spatial Analysis
 GIS Applications
 Graphic Communication
 Planning Theory
 Landforms

Experiential learning includes planning studios, labs, internships, fieldwork

Year 0



High School Diploma or G.E.D.

Transportation CTE coursework if available.

Experiential Learning & Professional Development Opportunities

Student professional associations provide professional development and networking opportunities to students, bridging coursework to practice. Many associations provide experiential learning opportunities like design/build or other student competitions; professional conferences and other networking opportunities, as well as student scholarships and other support. In addition, many institutions either require or strongly encourage work-based learning experiences for their students through internships and/or co-ops. Industry and education institutions can work together to ensure that safety-focused experiences and application of safety skills are an important component of these student development experiences. Relevant transportation planning experiential and work-based learning is available through the following sources:

[American Planning Association \(APA\)](#)

Attending an APA-accredited university or obtaining membership connects students to a network of professional planners and an opportunity to obtain an American Institute of Certified Planners (AICP) certification, the only national independent verification of planner qualifications.

[Global Planners Network \(GPN\)](#)

Student APA members are able to connect with GPN's global network of planning associations, through APA regional conferences here in the United States.

[Association of Metropolitan Planning Organizations \(AMPO\)](#)

AMPO provides student members discounted rates to join with an opportunity to attend their annual conference and periodic events.

[Association of Pedestrian and Bicycle Professionals \(APBP\)](#)

APBP provides full time student members with a passion for bicycle and pedestrian transportation with an APBP mentor program and scholarship opportunities for professional meetings.

[The Urban Land Institute \(ULI\)](#)

ULI offers workshop and research competition opportunities hosted across the country, which support the development of member understanding on current urban planning challenges and how to address current trends in industry.

[State Departments of Transportation](#)

DOTs offer internships for both community college, university and graduate students. Internships or co-ops are available in a number of occupations relating to asset management: civil engineering, construction, and maintenance. Some DOTs also employ college students to assist in the completion of work related to crash system input and analysis.

[Women's Transportation Seminar International \(WTS International\)](#)

WTS International provides professional development, encouragement, and recognition to support women in their transportation careers. WTS International provides student members with a scholarship program, mentor program, and various professional development opportunities.

[Dwight David Eisenhower Transportation Fellowship Program \(DDETFP\)](#)

The DDETFP awards fellowships to students pursuing master's or doctoral degrees in transportation-related disciplines. As a part of the fellowship program, each year fellows participate in the Transportation Research Board (TRB) Annual Meeting.

[Traffic Safety Scholars Program](#)

The Traffic Safety Scholars (TSS) Program provides awards of up to \$1,000 to undergraduate and graduate students to help defray the cost of attending the Lifesavers Conference on Highway Safety Priorities. This conference provides opportunities to learn about highway safety issues from leading experts and network with the largest gathering of highway safety professionals anywhere in the country.

[National Highway Institute \(NHI\)](#)

NHI provides trainings and education for highway professionals in order to improve the conditions and safety of roads, highways, and bridges.

[Association for Public Policy Analysis & Mgmt \(APPAM\)](#)

APPAM provides graduate student members with an opportunity to attend regional conferences and participate in a mentor-matching program.

[Institute of Transportation Engineers \(ITE\)](#)

ITE provides transportation professionals with the knowledge, practices, and skills needed to help shape the future of transportation. Student membership is free and grants access to ITE trainings and events as well as networking opportunities.

Innovative Strategies for Integrating Safety Competencies into Varied Programs of Study

A safety career pathway involves attaining specialized safety competencies within various traditional transportation programs of study. In addition to acquiring academic and technical preparedness within a broader field (e.g. Planning or Construction), students and incumbent workers on a safety career pathway will pursue research, experiential learning, on-the-job training and other work-based or real-world learning experiences focused on transportation safety. Examples of effective safety integration models are listed that provide curricular and co-curricular value to student safety career preparedness:

Co-Curricular

Transportation Agency/University Research Partnerships

Research partnerships between university faculty and state DOTs are proven sources for safety workforce development when they: 1) are implemented over the long-term; and 2) actively involve faculty and both undergraduate and graduate multi-disciplinary students in the implementation of safety research and project development.

On-Campus DOT Design Units

Many campuses partner with transportation agencies to provide on-campus internship experiences to undergraduate students in roadway design or traffic operations projects. These programs provide students with hands-on design experience and exposure to state DOT standards and practices while building a pipeline into transportation engineering careers.

Safety-Focused Work-Based Learning

Particularly in construction programs, many institutions either require or strongly encourage work-based learning experiences, which can be utilized to attain safety-focused experiences and to apply safety skills in the workplace.

Curricular

Engaged Scholarship

Most universities provide mechanisms to incorporate community projects into student coursework, either through senior design, capstone, or service learning courses. Engagement of transportation organizations with universities to provide safety-focused course-based projects can serve as a powerful student exposure and recruitment tool to safety career pathways. Some universities provide opportunities to scale up these types of engaged scholarship opportunities so that one agency partner can provide multiple projects over the course of an academic year.

Safety-Focused Course-Based Learning

Integration of safety topics and experiential learning into the classroom can be accomplished in various ways, including incorporation of safety-focused case studies and lab exercises into required coursework; and implementation of assignments that demonstrate understanding of safety principles and processes, through development of safety plans, safety data

analysis assignments, or implementation of accident investigations or safety audits. Job site visits and field trips have also been identified useful tools for promoting student interest in safety.

Students can design their own externship experience.

Competency-Based Curriculum

A curriculum that meets academic and quality standards, designed and organized by competencies required for jobs and cross-walked with industry skill standards and certifications, can be designed for safety. Job profiling and the use of "SMEs" should be considered to meet the competency needs of employers. The proliferation of industry-driven professional safety certifications can be used to facilitate this process. Programs of this kind may award credit for prior learning, allowing incumbent workers to achieve credentials by demonstrating knowledge and skills developed on-the-job.

Asynchronous Learning

Provide education and training for students and incumbent workers at times and locations convenient to students and employers, rather than instructors or institutions. This may include evenings or weekends, blended or "hybrid" delivery models, and delivery at off-campus locations.

Problem-Based Learning

Problem-based learning provides students with opportunities to solve real life problems, often in environments that replicate the workplace (e.g. design within constraints, working on multidisciplinary teams, etc.). Industry engagement with educators to provide real world problem examples and guidance on project constraints enhances student experience.

Work-Based and Experiential Learning

Incorporate opportunities for "learning-by-doing", including internships, co-op work experience, simulations, and team class projects that are assignments from local employers.

