

TRANSIT SAFETY and SECURITY



Training Catalog



This catalog is specifically targeted to the transit bus and rail industry and all courses are sponsored by the Federal Transit Administration. For information regarding additional TSI training, please go to www.dot.gov/tsi.



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Mission

Innovative Training for Today's Transportation Professional

The Transit Safety and Security Division was established in 1976 in direct support of the Federal Transit Administration's (FTA) mission to provide economical, timely, state-of-the-art training and educational opportunities to the transit industry. The division assists FTA in meeting its federal training mandate by developing, managing and delivering innovative instruction through instructor-led course offerings and e-learning technologies.

We serve as a steward for FTA, responsible for equipping transportation employees with the core competencies they need to operate, maintain, and manage public transportation systems. All training is designed specifically to meet the needs of today's changing transit industry, its regulations and safety best practices.

Supporting Public Transit Agencies and FTA's Public Transportation Safety Certification Training Program Rule

TSI's transit safety and security courses are specifically developed for U.S. public transit agencies. The courses support FTA's Public Transportation Safety Certification Training Program Rule for Federal and State employees, or other designated personnel, who conduct safety audits and examinations of public transportation systems and employees of public transportation agencies directly responsible for safety oversight.

Upon successful completion of TSI training courses, attendees receive real-world tools and resources, which enable participants to enhance the safety and security programs within their respective agencies. Course materials are routinely updated to ensure all pertinent regulatory requirements are addressed, including the Fixing America's Surface Transportation (FAST) Act (FTA's safety oversight authority, Chapter 53 of Title 49 U.S.C. (MAP-21), 49 CFR Part 655.14 (b) (2) and 49 CFR Part 659, etc.) (Pub. L. No. 114-94).

State Safety Oversight Personnel Training

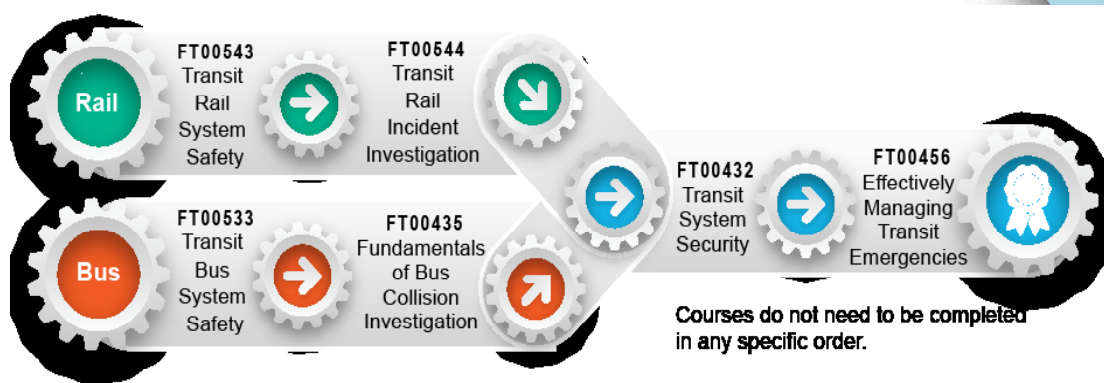
At the beginning of the fiscal year, priority seating is available for State Safety Oversight (SSO) personnel to attend specific TSI training. This training will assist program managers in obtaining the technical knowledge and skills to successfully perform their jobs and foster working partnerships between the transit agency, SSO community, and FTA.

U.S. Department of Transportation Certificates

TSI issues U.S. Department of Transportation certificates to participants who successfully complete courses. Participants earn a certificate of successful completion based on a score of 80% or higher of a competency based exam. Seminar participants receive a certificate of attendance.

Transit Safety and Security Program (TSSP) Certificate

The Transit Safety and Security Program (TSSP) certificate is awarded to those transportation professionals who complete four (4) specified courses within a 3-year time frame, and illustrates that the certificate holder was provided the necessary information to develop and implement system safety, security, and emergency management program plans. Individuals can choose either or both paths.



The TSSP certificate courses meet the requirements for FTA's Public Transportation Safety Certification Program, and can also be applied toward World Safety Organization certification.

World Safety Organization Certification

The World Safety Organization, Inc. (WSO) established four certification categories for the rail and bus transportation industry. Qualifications and criteria are as follows:

RAIL TRANSPORTATION CERTIFICATION

Certified Safety Specialist (CSS-Rail)

*Must successfully complete five of the core transit-related courses conducted by the USDOT/TSI and have a minimum of five (5) years of directly related safety experience in the rail transportation industry.

Certified Safety/Security Director (CSSD-Rail)

*Must successfully complete five of the core transit-related courses conducted by the USDOT/TSI and have a minimum of ten (10) years of directly related safety and security experience in the rail transportation industry.

Certified Safety Manager (CSM-Rail)

*Must successfully complete five of the core transit-related courses conducted by the USDOT/TSI and have a minimum of fifteen (15) years of directly related safety experience in the rail transportation industry.

Certified Safety Executive (CSE-Rail)

*Must successfully complete five of the core transit-related courses conducted by the USDOT/TSI and have a minimum of fifteen (15) years of directly related safety experience in the rail transportation industry.

Select from the following for the rail program:

FT00464 – Transit System Safety
 FT00430/FT00543 – Transit Rail System Safety
 FT00457 – Transit Industrial Safety Management
 FT00432 – Transit System Security
 FT00456 – Effectively Managing Transit Emergencies
 FT00430/FT00544 – Transit Rail Incident Investigation
 FT00461 – Advanced Rail Incident Investigation
 FT00564 – SMS Principles for Transit

BUS TRANSPORTATION CERTIFICATION

Certified Safety Specialist (CSS-Bus)

*Must successfully complete five of the core transit-related courses conducted by the USDOT/TSI and have a minimum of five (5) years of directly related safety experience in the bus transportation industry.

Certified Safety/Security Director (CSSD-Bus)

*Must successfully complete five of the core transit-related courses conducted by the USDOT/TSI and have a minimum of ten (10) years of directly related safety and security experience in the bus transportation industry.

Certified Safety Manager (CSM-Bus)

*Must successfully complete five of the core transit-related courses conducted by the USDOT/TSI and have a minimum of fifteen (15) years of directly related safety experience in the bus transportation industry.

Certified Safety Executive (CSE-Bus)

*Must successfully complete five of the core transit-related courses conducted by the USDOT/TSI and have a minimum of fifteen (15) years of directly related safety experience in the bus transportation industry.

Select from the following for the bus program:

FT00464 – Transit System Safety
 FT00533 – Transit Bus System Safety
 FT00457 – Transit Industrial Safety Management
 FT00432 – Transit System Security
 FT00456 – Effectively Managing Transit Emergencies
 FT00435 – Fundamentals of Bus Collision Investigation
 FT00472 – Intermediate Problems in Bus Collision Investigation
 FT00556 – Advanced Problems in Bus Collision Investigation
 FT00564 – SMS Principles for Transit

These initiatives recognize the expertise of rail and bus transportation safety and security professionals. Certification is an important step in determining a basic level of competence that is measurable by and meaningful to management and peers within the industry. Interested safety practitioners should contact the WSO for further details and an application. NOTE: Individuals who have received TSI's Transit Safety and Security Program (TSSP) certificate can apply this coursework to World Safety Organization (WSO) certification. To obtain WSO certification, applications for membership and certification must be submitted according to WSO membership and certification policy.

WSO World Management Center
P. O. Box 518, Warrensburg, MO 64093
Telephone: (660) 747-3132
E-mail: info@worldsafety.org

Continuing Education Units (CEU)

TSI has been accredited as an Authorized Provider by the International Association for Continuing Education and Training (IACET). In obtaining this accreditation, TSI has demonstrated that it complies with the ANSI/IACET Standard which is recognized internationally as a standard of good practice. As a result of their Authorized Provider status, TSI is authorized to offer IACET CEUs for its programs that qualify under the ANSI/IACET Standard. Courses with CEU approval are annotated in the course description.



Hosting a Course

If you are interested in hosting a course, please complete the form at the back of this catalog and email it to TSI at transit@dot.gov. Requests can also be submitted in writing using your agency's letterhead. Be sure to include all information requested on the form.

Agencies can submit host requests at any time; however, to be considered for the upcoming fiscal year (October through September), you must submit your host requests by April 30. Hosts are selected based on industry and agency need, geographical location, FTA guidance, funding, etc.

Host Requirements

- A training room that meets TSI's requirements
- Ample room to conduct and support field exercises (as the course necessitates)
- On-site clerical and logistical support
- Provide transportation to/from training site for participants and instructors
- Secure storage area for class materials and equipment
- Lodging arranged for participants and instructors in accordance with TSI and Federal travel guidelines
- Guaranteed registration of twelve participants either from the host agency or other organizations invited by the host agency
- Payment of materials fees for host participants

The number of participants for some courses may be limited. If the course is not filled with outside registrants, the host agency may register additional participants. For more information about hosting a course, call (405) 954-3682.



VIRTUAL LIVE TRAINING & ONLINE COURSES

Curbing Transit Employee Distracted Driving (FT00555)

Length: ½ hour (Online)

Materials Fee: \$0

Course Overview

This course is designed to raise awareness of distracted driving with the desired outcome of reducing the risk of distracted driving by public transportation professionals.

Course Elements

- Definition of the term “distracted”
- Risks of driving while distracted
- Typical distractions
- Tips for preventing distracted driving
- Regulations, laws, and company policies using wireless devices

Who Should Attend

Transit Operators, Transit Supervisors, Risk Managers, Operations Managers, Safety Managers, Transit Operator Trainers, and all other public transportation professionals

Fatigue and Sleep Apnea Awareness for Transit Employees (FT00558)

Length: ½ hour (Online)

Materials Fee: \$0

Course Overview

This course is designed to inform and guide transit operators and systems regarding the identification and treatment of individuals at high risk for obstructive sleep apnea and other sleep disorders, as well as general concepts about sleep and fatigue.

Course Elements

- Sleep states and stages
- Sleep apnea and other sleep disorders
- Self-assessment quiz
- Sleep strategies
- Circadian Rhythms
- Nutrition and exercise
- Over the counter drugs
- Final exam

Who Should Attend

Transit agency personnel



Photo courtesy of TSI.

SMS Awareness (FT00568)

Length: 1 hour (Online)

Materials Fee: \$0

Course Overview

This course will introduce the participant to Safety Management Systems (SMS). This course is a prerequisite for the SMS Safety Assurance Virtual Live Training (VLT) Course.

Course Elements

- Introduction to Safety Management Systems (SMS)
- Four components of FTA's SMS Framework
- Importance of Employee Safety Reporting

Who Should Attend

Transit agency personnel

SMS Safety Assurance (FT00561)

Length: 2 hours (Virtual Live Training)

Materials Fee: \$0

Course Prerequisite

Successful completion of SMS Awareness (FT00568)

Course Overview

This virtual live training (VLT) course is designed to examine the Safety Assurance (SA) sub-component within a SMS and discuss the (3) key sub-components and essential SA activities and tools necessary to verify the effectiveness of safety risk mitigations and that no new safety risks have been introduced through implementation of the mitigations or changes.

Course Elements

- FTA SMS Framework
- Safety Assurance activities and tools
- The relationship between Safety Risk Management (SRM) and Safety Assurance (SA)
- Current SRM/SA activities and tools, as well as the gaps that exist
- Safety Performance Monitoring and Measurement
- Practical Drift
- Management of Change
- Continuous Improvement
- Online pretest and online final exam

Who Should Attend

Federal personnel and their contractor support who conduct safety audits and examinations of public transportation systems, State Safety Oversight Agency (SSOA) personnel and their contractor support who conduct safety audits and examinations of public transportation systems, and rail transit agency employees who are directly responsible for safety oversight. Additionally, this course is recommended to bus and rail transit Safety Managers and Supervisors, Operations and Maintenance Managers/Supervisors, Operator Trainers, Risk Managers, Senior Transit Directors/Administrators, Collision Investigators, Internal Safety Auditors, Human Resource Managers, and Board of Directors and City Council Members with transit agency oversight

Transit Bus Nomenclature (FT00552)

Length: 1 hour (Online)

Materials Fee: \$0

Course Overview

This online course will provide an overview of the basic terminology and components used in bus transit systems.

Course Elements

- Introduction to bus transit
- Types of buses
- Transit bus modes
- Exterior bus features
- Interior bus features

Who Should Attend

Transit agency personnel and State Safety Oversight Personnel



Transit Rail Nomenclature (FT00569)

Length: 3.5 hours (Online)

Materials Fee: \$0

Course Overview

This online course will provide an overview of the basic terminology and components used in rail transit systems.

Course Elements

- Introduction to rail transit
- Rail transit modes
- Rail transit vehicles
- Track
- Special trackwork
- Traction power
- Signal Systems
- Rail grade crossings

Who Should Attend

Transit agency personnel and State Safety Oversight Personnel



GENERAL TRANSIT SAFETY COURSES

Reasonable Suspicion and Post Accident Testing Determination Seminar (FT00546)

Length: 4½ hours

Materials Fee: \$30

Seminar Overview

This seminar is designed to educate participants on DOT/FTA regulations requiring drug and alcohol testing of safety-sensitive transit workers. The focus will be specific training requirements for those employees (e.g., dispatchers, supervisors, managers, etc.) who will be making the determination of when to administer reasonable suspicion and post-accident drug and/or alcohol tests for safety sensitive employees. This seminar meets and exceeds the requirements under 49 CFR Part 655.14(b)(2).

Seminar Elements

- FTA Post-Accident drug and alcohol testing requirements and procedures
- FTA Reasonable suspicion drug and alcohol testing requirements and procedures
- Signs, symptoms, and workplace impact of alcohol misuse
- Signs, symptoms, and workplace impact of drug abuse
- Physical, behavioral, speech, and performance indicators of probable drug abuse and alcohol misuse
- Supervisor roles and responsibilities
- Scenario-based exercises and practice cases related to transit testing determination situations

Who Should Attend

Transit dispatchers, supervisors, and other transit company officials who may be required to make a testing determination of a safety sensitive employee.

Safety, Security, & Emergency Management Considerations for FTA Capital Projects (FT00551)

Length: 2 days

Materials Fee: \$50

CEUs: 1.0

Course Overview

This course is designed to provide participants with the knowledge and skills to effectively implement system safety, security, and emergency management principles early on during FTA capital funded projects.

Course Elements

- Research and guidelines
- Transit Standards
- Manual on Uniform Traffic Control Devices (MUTCD)
- American Association of State Highway and Transportation Officials (AASHTO) Green Book
- National Fire Protection Association NFPA 130
- Training and outreach
- Regulations and guidance
- Data collection and analysis
- Technical assistance
- Reviews and audits
- Multimodal performance measures
- Tabletop exercises
- Pretest, quiz, final exam

Who Should Attend

FTA HQ and Regional Staff, Grantee Technical Staff, Federal Representatives, State Safety Oversight Personnel, Transit Planners/Designers, Transit Engineers, and Transit Project Managers

SMS Principles for Transit (FT00564)

Length: 2 ½ days

Materials Fee: \$55

CEU's: 2.0

Course Overview

This course includes an introduction to the principles and 4 components of a Safety Management System (SMS): Safety Policy, Safety Risk Management, Safety Assurance, and Safety Promotion. Building upon traditional transit system safety, participants will learn about FTA's SMS framework which includes executive leadership and accountability for safety, creating a positive safety culture, preventive risk analysis, and building an effective employee safety reporting program. At the end of this course, participants will have a greater awareness of critical safety practices which are available through SMS integration with transit system safety, including practical applications and exercises to begin SMS implementation.

Course Elements

- Introduction to SMS and FTA's rationale for the adoption of SMS
- FTA's SMS Framework (including sub-components)
- Evolution in Safety Thinking
- Safety Management Policy
- Safety Risk Management
- Safety Assurance
- Safety Promotion
- Employee Safety Reporting System
- Getting Started with SMS Implementation
- Pretest, quizzes, group exercises, and final exam

Who Should Attend

Senior Transit Directors/CEO's/Administrators, Safety Managers and Supervisors, Operations and Maintenance Managers/Supervisors, Operator Trainers, Risk Managers, Collision Investigators, FTA-State Safety Oversight personnel (SSO), Internal Safety Auditors, Human Resource Managers, and Board of Directors and City Council Members with transit oversight

Substance Abuse Management and Program Compliance (FT00465)

Length: 3 days

Materials Fee: \$50

SAPACC CEHs: 8

CEUs: 2.0

EACC PDHs: 19.5

Course Overview

This course is designed to provide the participant with the knowledge to evaluate and self-assess their agency's substance abuse program and compliance with FTA regulations and industry best-practices. The course involves lecture, videos, Q&A sessions with expert instructors, and peer information sharing. This course promotes a better understanding of FTA substance abuse compliance regulations and their application to transit agency policies and procedures.

Course Elements

- Legislative-regulatory requirements for 49 CFR Part 655 and 49 CFR Part 40
- Categories of safety-sensitive testing types: pre-employment, reasonable suspicion, post-accident, random, return to duty, follow-up, checklist review, and action plan
- Testing procedures
- Urine specimen collection procedures
- Drug testing laboratory regulations and procedures
- Medical Review Officer (MRO) procedures
- Procedures for Substance Abuse Professional (SAP) referrals
- Contractor and service agent oversight, checklist review, and action plan
- Alcohol testing procedures, breath test, saliva test, checklist review and action plans
- Recordkeeping requirements, reporting procedures, and confidentiality/information disclosure procedures
- The FTA audit process and common deficiencies found by auditors
- Training requirements, safety-sensitive employees, supervisors' reasonable suspicion
- FTA voluntary Prescription (Rx) and Over-the-Counter (OTC) program updates
- General review of transit agency minimum policy content requirements
- Instructor-led Q&A and group discussions, pretest, final exam

Who Should Attend

Human Resource Managers, Safety Managers, State DOT Representatives, Third-Party Administrators, Substance Abuse Professionals, Drug & Alcohol Program Managers (DAPM), and Designated Employer Representatives (DER)

Transit Industrial Safety Management (FT00457)

Length: 4½ days

Materials Fee: \$80

CEUs: 3.0

Course Overview

This course is designed to provide the participant with the ability to develop, implement, and maintain an industrial safety management program, following OSHA principles and guidelines, for the transit workplace. Emphasis is on minimum OSHA safety standards for general industry, review of the 29 CFR 1910 OSHA standards book, proactive safety policies in transit, proactive identification of hazards and unsafe practices, hazard controls and safety risk mitigation, documentation, employee training requirements, and management of a workplace safety program. A 30-hour OSHA general industry card is earned by participants who successfully complete the course.

Course Elements

- Introduction to occupational health, the Occupational Safety and Health Act
- Recordkeeping
- Accident/Incident investigation
- Hazardous materials (HAZMAT), hazardous communications (HAZCOM), to include review of Safety Data Sheets (SDS)
- Fire protection
- Bloodborne pathogens
- Lock-out, tag-out
- Walking and working surfaces, slips, trips, and falls
- Electrical
- Safeguarding machinery
- Welding and brazing
- Hand and power tools
- Hearing protection
- Materials handling
- Confined spaces
- Personal protective equipment, respirators
- Fatigue
- Workplace violence
- Emergency plans and evacuation
- Loss control
- Ergonomics
- Flammable and combustible liquids
- Industrial hygiene
- Preparation for site inspection and audit guidelines
- Field exercise: On-site “Mock” OSHA Audit (PPE required: ANSI approved safety shoes)
- Pretest, homework, group audit presentations, final exam

Who Should Attend

System Safety Program Developers, Administrators, and Implementers, Safety Inspectors and Auditors, Safety Managers and Supervisors, Risk Managers, Operations Managers and Supervisors, Maintenance Managers and Supervisors, and front-line personnel involved with transit agency safety committees

Transit Safety and Security Audit Course (FT00567)

Length: 3 days

Materials Fee: \$55

CEUs: 2.0

Course Overview

Discover what makes an effective audit. Prepare for and conduct a simulated safety audit of operational processes to verify safety performance. Evaluate the effectiveness of and conformance to safety risk controls. Learn the expectations for planning and conducting audits, reporting audit results and maintaining records.

Course Elements

- The System Safety and Security Audit (definition, terminology, purpose and scope of audit, professionalism)
- The audit process
- Scope of the audit
- Scheduling
- Notification
- Document requests and reviews
- Audit checklists
- Interviews
- Verification
- Findings and recommendations
- The audit report and presentation
- Corrective Action Plans
- Follow-up and tracking
- The audit cycle
- The audit program
- Auditing success
- Pretest, exercises, final exam

Who Should Attend

Transit Agency Internal Auditing Personnel, Transit Safety Managers, Transit Industrial Safety Compliance Officers, Transit Employees who may be called upon to perform or participate in audits/safety assurance, State Safety Oversight Personnel, and FTA employees and Contractors

Transit Supervisor Certification Course (FT00545)

Length: 4½ days

Materials Fee: \$65

CEUs: 3.0

Course Overview

This course is designed to assist new and veteran front line supervisors to effectively implement their human resources management responsibilities. The fundamentals and regulatory responsibilities of supervision will be addressed, as well as, day-to-day operations.

Course Elements

- Fundamentals of supervision
- Communication
- Delegation
- Performance evaluations
- Customer service
- Ethics in the workplace
- Americans with Disabilities Act
- Equal Employment Opportunity
- Family Medical Leave Act
- Prevention of sexual harassment
- Reasonable suspicion
- Scheduling and dispatch
- Emergency management
- Vehicle troubleshooting
- Discipline and grievance procedures
- Tabletop exercises
- Pretest, quiz, final exam

Who Should Attend

New Supervisors, Veteran Supervisors, Potential Supervisors, Operations Managers, Safety Managers, and Risk Managers

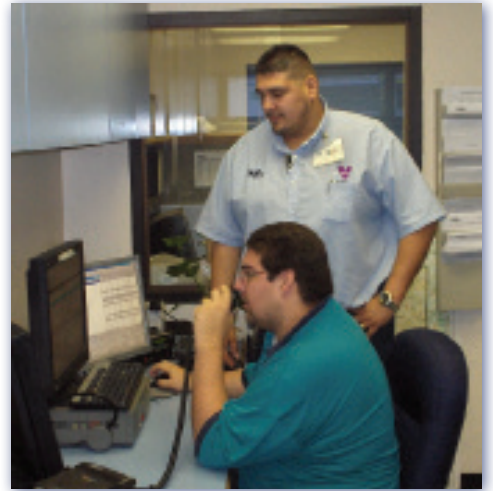


Photo courtesy of TSI.

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TRANSIT BUS COURSES

Advanced Problems in Bus Collision Investigation (FT00556)

Length: 4½ days

Materials Fee: \$80

CEUs: 3.0

Course Prerequisite

Successful completion of Fundamentals of Bus Collision Investigation (FT00435)

Course Overview

This course involves an extensive use of complex speed estimates and mathematical formulas, including time and distance relationships. Participants will employ advanced collision investigation techniques and methodologies to identify and analyze skid marks, enhanced photographic documentation, and identify contributing factors to injuries and damage, as they relate to speed in pedestrian, bus, automobile, and motorcycle collisions. The participant will receive information needed to recommend and implement safety improvements to prevent and reduce collisions, including property damage, injuries, and litigation.

Course Elements

- Chain of events in a collision and investigator tools
- Combined speeds skids on consecutive and simultaneous surfaces
- Speed/Velocity conversions
- Time and distance
- Airborne equations – falls, vaults, and flips
- Pedestrian collisions
- Motorcycles
- Field investigation simulated trial
- Field exercise: simulated collision and on-scene investigation
- Assembling investigation, case preparation
- Exercise: Field investigation and simulated court trial, case presentations, and testimony (PPE required: leather upper, flat sole shoes)
- Pretest, quizzes, homework, group exercises, final exam

Who Should Attend

Safety Managers, Safety Supervisors, Operations Managers, Operations Supervisors, Field Supervisors, Maintenance Managers, Maintenance Supervisors, Bus Operator Trainers, Contributing Factor Assessors, Probable Cause Assessors, and Documentation Assemblers



Photo courtesy of TSI.

Fundamentals of Bus Collision Investigation (FT00435)

Length: 4½ days

Materials Fee: \$85

CEUs: 4.0

Course Overview

This course includes basic investigation tools and techniques relating to data collection, on-scene evidence documentation, damage and debris evidence analysis, witness interview techniques, computation of simple speed estimates, and report writing. Implementation of techniques learned can greatly improve the effectiveness of accident investigations and root-cause analysis. This course requires a working knowledge of basic high school algebra. The instructor team utilizes multiple scenario-based classroom practice exercises, to effectively assist participants in understanding the use of mathematical formulas to determine various elements related to bus collisions.

Course Elements

- SMS-based practical applications used to reduce bus collisions and Chain-of-Events in a collision
- Center of mass and evaluating damage and debris
- Interpretation and measurement of marks on the road
- General principles of collision investigation math and use of calculators
- Minimum speed estimates from skid marks and yaw marks
- Interview techniques
- Principles of field sketching
- Photography
- Collision case preparation and presentation workshop
- Outdoor exercise (PPE required: leather upper/closed toe shoes)
- Pretest, quizzes, homework, group presentations, final exam

Who Should Attend

Bus Operator Trainers, Collision Investigators, On-scene Investigators, Investigation Policy Developers, Investigation Policy Administrators and Implementers, Reporting Personnel, Investigation Policy Implementers, Safety Managers, Safety Supervisors, Operations Supervisors, Risk Managers, Field Supervisors, Operations Managers, Maintenance Managers, and Maintenance Supervisors

Instructor's Course for Transit Trainers (FT00562)

Length: 5 days

Materials Fee: \$140

CEUs: 3.0

Course Overview

This instructor-led course provides a standardized training program that can be used by any transit service provider to train qualified, professional bus/paratransit operators. Instructors are trained in presentation and creative learning techniques, facilitation methods, and adult learning principles for teaching operators skills in vehicle operation, emergency management, and customer relations. Upon completion of this course, instructors are qualified to train bus/paratransit operators by the U.S. Department of Transportation. All bus/paratransit operators trained by these instructors will receive U. S. Department of Transportation certificates from TSI upon receipt of a written request from the instructor and submission of the course evaluations and roster. Instructors will receive TSI course materials to teach vehicle operations, emergency management, and customer relations. Instructors will also receive the traditional classroom version of the Curbing Transit Employee Distracted Driving and Fatigue and Sleep Apnea Awareness for Transit Employees seminars. Included with the materials are all manuals, electronic slideset/presentation, quizzes, course evaluation, and certificate request form, authorized by the Federal Transit Administration.

Course Elements

- Teaching in various training environments, the trainer's role
- Adult learning principles
- Delivery styles and methods, training aids, using multimedia equipment
- Facilitation skills, the art of questioning, managing class participation
- Team teaching, training strategies, the environment, class configuration
- Role-playing exercises and training presentations, self-evaluation
- Pretest, final exam

Who Should Attend

Driver Trainers, Safety Managers, Safety Supervisors, Bus/paratransit Operator Trainers, and Training Managers

Transit Bus System Safety (FT00533)

Length: 4½ days

Materials Fee: \$110

CEUs: 3.0

Course Overview

This course presents a formalized, standard approach to bus system safety concepts and program plans. Participants will receive instruction and guidance in developing and implementing a transit bus System Safety Program Plan which is critical to bus system safety.

Course Elements

- Core system safety elements; enhanced system safety elements suggested by the FTA
- Safety climate and the impact on safety performance
- Consequences of accidents and incidents
- Heinrich Ratio
- System safety; System safety as a management discipline
- Management and engineering principles; Hazard identification and resolution
- Components of the system safety management process
- Roles and activities for the safety unit and safety committee
- Management
- System Safety Program Plan (SSPP) content requirements
- Employee selection criteria
- Vehicles, facilities, equipment and systems
- Human resources
- Americans with Disabilities Act (ADA)
- Safety and security Activities
- Threat and vulnerability analyses
- Emergency/All-hazards management
- Exercise: informal site audit (PPE required: leather upper, flat sole shoes)
- Pretest, quiz, final exam

Who Should Attend

System Safety Program Plan Developers, Implementers, and Administrators, Transit Executive Managers, Human Resource Managers, Facility Managers, Risk Managers, Auditors, Design Engineering Vendors, Construction Vendors, Transit Consultants, Technology Vendors, Bus Transit Safety Managers, Safety Supervisors, Equipment Maintenance Managers, and Equipment Maintenance Supervisors



TRANSIT RAIL COURSES

Advanced Rail Incident Investigation (FT00461)

Length: 4½ days

Materials Fee: \$110

CEU's: 3.0

Course Prerequisites

Successful completion of Transit Rail Incident Investigation (FT00430/FT00544)

Course Overview

This course provides information to allow the investigator to conduct in depth rail investigations. The training is designed to educate the employee, manager, and investigator in a systems approach to investigating complex rail incidents. This training will develop an understanding of the interdependency and system interactions associated with rail so the agency can lessen its liability claims and reduce rail incidents. Training will enhance the understanding of rail issues, assist in determining causes, and expand contributing factors through comprehensive investigative techniques. This training is a subsequent building block to the Transit Rail Incident Investigation course, in that it expands into a more technical analysis of the rail issues and problems, as well as understanding the complexity of systems. It is expected that this training will provide a broader understanding of rail incidents and provide newer techniques for the senior investigator.

Course Elements

- Types of rail systems, incidents, and investigations (review)
- System elements (track, signals, traction power, train control, vehicles)
- Track-Train dynamic forces (wheel/rail, train and grade resistance, acceleration and braking, braking curves, criteria tolerance)
- Change factors (track, signals, power, vehicles)
- Operating rules
- Human factors
- Investigative tools and techniques
- Documentation report preparation
- Exercises: system, investigation - forces, table-top, track-train dynamics (PPE required: steel-toed safety shoes or boots)
- Pretest, quizzes, final exam

Who Should Attend

Risk Managers, Rail Operating Executives, Rail Accident Investigators, Rail Supervisors, Rail Managers, Rail Maintenance Managers, Transit Police, Claims/Insurance Adjusters, Law Enforcement Personnel, Rail Vehicle Manufacturers, Rail Safety Personnel, Rail Security Personnel, Operations Managers, Operations Staff, Rail System Designers, and Federal, State, and Local Officials



Photo courtesy of TSI.

Transit Rail Incident Investigation (FT00544)

Length: 4½ days

Materials Fee: \$95

CEUs: 3.0

Course Overview

This course is designed to provide participants with the knowledge and skills to successfully investigate various types of transit incidents and comply with the requirements of State Safety Oversight Rule 49 CFR Part 659. This will be achieved utilizing the systems approach to incident investigation, used by the National Transportation Safety Board. Examples are drawn from light rail, commuter rail, and heavy rail operations. The course will assist participants to better understand how the investigation process shall be used to prevent rail transit incidents and to allow for successful implementation of corrective actions plans.

Course Elements

- Rail system elements overview (including track, signals, power, communications and supervisory control and data acquisition systems, and rail vehicles)
- Systems approach to incident investigation, types of investigations, purpose of investigations
- Implementing the investigation, investigation tools, managing and organizing the investigation, evidence collection
- Collecting incident information on-site and off-site
- Recommendations, types of incidents, identification, evaluation, follow-up
- Photography, planning, and techniques
- Interview techniques, identification and arrangement, factors that affect witness statements, interview questions
- Human factors, behavior, health and medical, training, job and task evaluation, equipment design/ergonomics, environment, internal/external records and documentation
- Report writing, purpose and use of accident reports, report outline, preparation of draft and final reports
- Collision investigations, types of rail operations, types of collisions
- Derailment investigations, examples of derailments, derailment causes (track, track structure, rail defects, vehicles, lateral to vertical ratio), determining the original point of derailment, on-site investigation, off-site investigation
- Grade crossing collision investigation
- Train handling
- Case studies
- Field exercises (derailment simulation, track measurements, and track and rail vehicle nomenclature (PPE required: steel-toed safety shoes or boots)
- Pretest, case studies, homework, group presentations, final exam



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Who Should Attend

State Safety Oversight Representatives, System Safety Program Plan Implementers, Rail Accident Investigators, Safety Managers, System Safety Program Plan Managers, Rail Accident Analyzers, Risk Managers, Safety Supervisors, Operations Managers, Operations Supervisors, Inspectors and Auditors, Design Engineers, Transit Emergency Responders, Maintenance Inspectors, and Federal, State, and Local Officials

Transit Rail System Safety (FT00543)

Length: 4½ days

Materials Fee: \$140

CEUs: 3.0

Course Overview

This course will provide participants with the knowledge and skills to successfully implement transit rail system safety principles, as well as the required elements of the State Safety Oversight Rule 49 CFR Part 659. The course includes an in-depth study of hazards analysis and its implementation throughout the system life cycle, from planning and design, through construction, implementation of revenue service, and disposition. System safety in the acquisition and operations, bids, and specifications, safety certification program, certifiable items list, security, and emergency response are discussed. The training correlates the System Safety Program Plan to performing and proactively using the results of an internal safety audit program, investigating incidents and unacceptable hazardous conditions, developing corrective action plans, hazard resolution, and tracking for effectiveness.



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Course Elements

- Program management
- Program standard development
- Oversight of rail transit agency internal safety and security reviews
- Oversight agency safety and security review
- Incident notification
- Investigations
- Corrective Action Plans
- System Safety Program Plan: administrative, hazards/modifications/certification, data analysis/investigations, emergency management, management of the SSPP, regulatory requirements, and procurement
- Security Plan
- Pretest, classroom exercises, final exam

Who Should Attend

System Safety Program Plan Developers, Implementers, and Administrators, Transit Auditors, Rail Transit Safety Managers, Transit Executive Managers, Risk Managers, Human Resource Managers, SSO Personnel, Design Engineers/Architects, Operations Supervisors, Facility Managers, Construction Contractors, Transit Consultants, Federal Safety Personnel, State Safety Personnel, State Safety Oversight Reps, Rail Safety Supervisors, Equipment Maintenance Managers, Equipment Maintenance Supervisors, Technology Vendors, IT Specialists, Procurement Specialists, Security Managers, Front-line employees, Construction Managers, and Contract Managers

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TRANSIT CRIME PREVENTION/ EMERGENCY MANAGEMENT COURSES

Crime Prevention Through Environmental Design (FT00531)

Length: 2 days

Materials Fee: \$95

CEUs: 1.0

Course Overview

Crime Prevention Through Environmental Design (CPTED) links system security concepts and initiatives to the System Safety Program Plan early in the transit life cycle. The course emphasizes and enhances industry training by incorporating preventive measures into the facilities design and operations planning. For agencies to be in compliance with the State Safety Oversight regulation, it is critical to plan and design safety and security into all aspects of physical and operational systems.

Course Elements

- Review of basic concepts; Advanced assessments of risks and vulnerabilities
- Technology and equipment
- Audit checklists
- Best practices; Strategies
- Architectural design and space management concepts
- Environmental aims through space planning and behavioral concepts
- Crime as it relates to physical environment and law enforcement
- Crime prevention steps; Reducing criminal opportunity
- Principles of Transit Security Design Considerations
- Engineering CPTED into the transportation agency
- Electronic, mechanical, and physical equipment and material needed to enhance security
- Alarm and intrusion systems; Security personnel
- Exercise: informal site audit (PPE required: leather upper, flat sole shoes)
- Pretest, final exam

Who Should Attend

Transit Managers, Executive Managers, Safety Managers, Safety Supervisors, Risk Managers, Engineers Auditors, Corrective Action Personnel, Security Program Planners, Security Plan Developers, Security Plan Administrators, and Security Plan Implementers



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Effectively Managing Transit Emergencies (FT00456)

Length: 4 days

Materials Fee: \$60

CEUs: 2.0

Course Overview

This course will provide the participant with information on understanding the necessity, purpose, development, and implementation of emergency management and how it relates to the other safety functions of a transit system. Participants will learn how to better understand the emergency management concept and the role of the transit system in responding to emergency/disaster situations in both the community and transit system. The course provides information related to acquisition and operational phases of a transit system life cycle. Participants will be prepared to understand the elements of an effective emergency management program and how interaction of these elements affects the management of the emergency situations, as well as, the roles and responsibilities of internal transit agency personnel and external stakeholders (e.g. fire, police, EMS, etc.) The course structure includes training related to the U.S. National Response Framework (NRF), National Incident Management System (NIMS), and Incident Command System (ICS). The course concludes with an Advanced Table-Top Exercise (TTX) involving the class participants and utilizing the Homeland Security Exercise and Evaluation Program (HSEEP) format.



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Course Elements

- Domestic and International examples of transit related emergencies and disasters
- Nature of emergencies and disasters; emergency management concepts
- Development of an emergency management plan; emergency management training
- U.S. National Response Framework (NRF), Incident Command System (ICS), and Emergency Support Functions (ESF)
- Federal/State/Local requirements for transit emergency management planning and preparedness
- Emergency response jurisdictions
- Emergency resources, procurement, and Safety & Security Certification (SSC) requirements
- Continuity of Operations Planning (COOP)
- Pretest, tabletop simulations, group exercises, quizzes, final exam

Who Should Attend

General Managers, Safety Managers and supervisors, Operations Managers and supervisors, Risk Managers, Field Supervisors, Public Information Officers, State Safety Oversight personnel, City/County/State and transit Emergency Managers, and Staff-level First Responders (Fire, Police, Emergency Medical Services, etc.)

Transit System Security (FT00432)

Length: 4½ days

Materials Fee: \$75

CEUs: 3.0

Course Overview

Participants will receive the necessary information to develop a System Security Plan and implement the program. They will be shown how to use resources to reduce crime and improve customer and employee security. This course provides participants with a uniform format for developing and implementing security policies and procedures through a System Security Plan with crime prevention as the major component. Included are basic security terms, the eight steps in threat and vulnerability identification, and resolution process. The course addresses security in all stages of the system lifecycle, agency policies and procedures, managing special security issues, and various types of transit security staffing.

Course Elements

- Introduction to system security
- Why transit security
- Terrorist acts against transit
- Transit security countermeasures
- Development of a System Security Plan and security policies and procedures
- Threat and Vulnerability Assessment (TVA)
- Procurement and security activities
- Incident command system and coordination of response efforts and resources (NIMS/NRP)
- Security force establishment
- Problem oriented/problem solving security
- Managing the media
- Crime prevention
- Selling security to management and the public
- Group exercises: Security issues and TVA/Security Assessment (PPE required: leather upper, flat sole shoes)
- Pretest, quiz, final exam

Who Should Attend

Security Plan Developers, Security Plan Administrators, Security Plan Implementers, SSO Personnel, Safety Directors, General Managers, Law Enforcement Personnel, Risk Management Personnel, Security Personnel, Human Resource Personnel, Operations Personnel, Maintenance Personnel, Federal, State, Local Officials, Transit Consultants, Security Technology Vendors, Procurement Personnel, Transit Security Personnel, and Transit Insurance Providers

Transit System Security: Design Review (FT00538)

Length: 3 days

Materials Fee: \$90

CEUs: 2.0

Course Overview

This course is designed to aid transit safety and security personnel who need to have a proactive impact on the design review process during design and construction of new facilities, new starts, rehabilitation of existing facilities, or extensions to current systems. This will allow for the reduction of crime and improvement of employee and customer security. This course is beneficial to those individuals who need to understand the design review process.

Course Elements

- The project's big picture
- Identifying security within the project
- Security certification process
- Roles and responsibilities in security
- Project management view of security
- The value in value engineering
- Basis of design - project requirements
- Principles of Transit Security Design Considerations
- Preliminary design
- Design development phases
- Final design phase and bidding
- Effective design reviews
- Construction and closeout
- Types of contracts
- Tabletop exercises
- Pretest, final exam



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Who Should Attend

General Managers, Safety Directors, Human Resource Personnel, Risk Management Personnel, Operations Personnel, Maintenance Personnel, Transit Security Personnel, Law Enforcement Personnel, Security Technology Vendors, Transit Consultants, Federal Security Personnel, State Security Personnel, Procurement Specialists, and SSO Personnel

Request to Host a TSI Training Class

(Please photocopy this form for each course request)

Host Transit System: _____

Host Contact Name: _____

Address: _____

City/State/Zip: _____

Phone: _____ Cell: _____

Fax: _____ E-mail: _____

Course Title* _____

* If submitting more than one request, please submit one form per course and put in priority order.

1st Choice – Preferred Host Date: _____

2nd Choice – Preferred Host Date: _____

Is your employer an FTA Grant Recipient or Sub-recipient? ☐ Yes ☐ No

Is this request in association with a Homeland Security Grant? ☐ Yes ☐ No

Requests must be received by April 30 to be considered for the next fiscal year, which begins October 1.

Submit Host Request Form to transit@dot.gov

Transportation Safety Institute

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