Traffic Accident Investigation

INTRODUCTION

- Traffic safety represents a major area where the improvements can be made, mainly as it saves human lives. To know the "why?" we need to determine "what and how it happened."
- This Traffic Accident Investigation training course represents broad topics on investigating road traffic accidents, which is placed in the framework of immediate usefulness. It will take you to step – by – step process of the accident investigation while highlighting the crucial details which are to be used in expected output from the accident investigation. Also, modern technologies will enable the investigators to collect pieces of evidence in a safe, fast and efficient manner, to be able to reduce the time needed for traffic flow to continue uninterrupted.
- This course extends its reach to incorporate these new technologies; also, the traffic incidents are a significant part of the problems related to health and safety. It provides valuable insight into the process of investigation of the incidents. This could help, not only traffic engineers to better investigate traffic accidents, but health and safety professionals. As well to better understand the complex nature of traffic-related incidents and provides the required knowledge on how to implement them into the investigation related to the health and safety of the drivers, as well as other people who are driving or are in any other way involved in traffic. This course is essential for anyone interested in road safety as a whole and provides a brief description of on-scene accident investigation methods that exist today.

This training course will highlight:

- Securing the scene of the accident, evidence identification and the on-scene measurement
- Evidence preservation, scaled on – scene diagram production and evidence verification
- Vehicle examination, photogrammetric, advanced techniques of on-scene measurement and evidence compatibility
- Usage of available software or data for the further in-depth identification of the evidence
- Traffic accident reconstruction
- Modern technologies used in an on-scene investigation

OBJECTIVES

- The accident investigation is a field of practice that requires specialized study, training and experience. This training course is focused on the initial step towards the accident reconstruction and analysis, and will provide the delegates adequate knowledge to answer the questions: What? Where? When? Who? What with? Whom with? Why? How?

At the end of this training course, participants will learn to:

- How to investigate and reconstruct traffic accident
- A better understanding of the investigation process
- Learn how to reconstruct traffic accident through traffic evidence
- Use traffic simulations to reconstruct cause and consequence of traffic accident
- Learn to secure the scene

TRAINING METHODOLOGY

- This Traffic Accident Investigation training course will use proven adult learning techniques with the focus on exercises, different case studies and solving actual problems. Through the guided examples, videos, photos, and questioning, it is ensured that all learners can have the best possible chance at comprehending the required knowledge and skills.

ORGANISATIONAL IMPACT

- Determine risks involved in the everyday traffic
- Identify the best options of collecting evidences from the scene
- Gain understanding on road safety in the road network
- Create a comprehensive traffic crash investigation report
- Reduce paperwork and implement modern technologies
- Provide beneficial improvement options without massive investments
- Reduce costs and time lost in incident investigation and analysis

PERSONAL IMPACT

- The participants will obtain fundamental, theoretical and practical knowledge as well as integrated information about traffic safety, traffic accident, accident investigations and reconstruction of a traffic accident, as well as the creation of a road safety database.
- With this Traffic Accident Investigation training course, the participants are going to learn methods that help both experienced and novice investigators. This will provide the knowledge needed to avoid setbacks in the incident investigation, as well as the ways to address shortcomings in the initial investigation by applying the principles of the investigation.
- Learn how to conduct effective incident investigation and analysis
- Gain knowledge in on-scene fact-finding
- Enhance their knowledge in evidence identification
- Understand how to investigate and report traffic accidents properly
- Reduce time required for on-scene investigation with improving quality of the investigation

WHO SHOULD ATTEND?

- This Traffic Accident Investigation training course is a course for all involved in Health, Safety, Environment and Security as well as process improvement.

  This training course is suitable for a wide range of professionals but will greatly benefit:

- Traffic Engineers
- Professional Drivers
- Supervisors and Works Managers
- Researchers and Practitioners in Traffic Engineering
- People who are involved in Traffic and Transport Safety
- Researchers and Consultants involved in Traffic Safety and Traffic Investigators
- Health and Safety Professionals, and Medical Staff working on traffic accidents field
- Engineers, Engineering Technologist and Project Managers working for Local Government, Police and Military Officers and/or State/Federal Agencies, Consultants and Contractors
- Auditors and Incident Investigators
- Safety Managers, Safety Engineers and Safety Specialists
- Quality Improvement Personnel
- Risk Managers
- HSE Managers and HSE Advisors
- Process Safety Officers

Course Outline

Introduction, Terminology and Principles

- Introduction and Traffic Accident Terminology
- Factors of Traffic Safety:
- Human
- Vehicle
- Road
- Environment
- Legal
- Principles of the On-scene Investigation

Securing the Scene of the Accident, Evidence Identification and the On-scene Measurement

- Securing the Scene and Investigator Safety
- Impact – crash Phases
- Principles of the On-scene Investigation
- Using Drones and Lidar Technology

Evidence Identification, Preservation and Verification

- Evidence Identification
- Traces that appear before the Point of Collision
- Traces that appear at the Point of Collision
- Traces that arise after the Point of Collision
- Accident Evidence Found on the Vehicles
- Damage Marks
- Material Marks
- Wiping Marks
- Casting Marks
- Abrasion, Melting Marks
- Seatbelt Examination
- Evidence Verification

On – Scene Measurement

- Measurement Equipment and Measurement Procedures
- Measuring Damages on the Vehicles
- Investigation of the Road Design and Construction Elements Influence
- Characteristics of Rollovers On – scene Investigation
- Characteristics of Pedestrian and Animal Collision On – scene Investigation

Traffic Accident Reconstruction

- Using Software and Additional Resources
- Using Unmanned Arial Vehicles for On-scene Investigations
- Collision Analysis and Reconstruction
- Driver Reaction Time
- Determining Speed from the Braking Marks
- Safe Following Distance
- Calculating Speed of the Vehicle Lost due to the Damage in the Crash
- Calculating Speed of Rollover
- Pedestrian Collision Calculations
- Motorcycle Accident Reconstruction
- Conservation of Momentum Calculations for Accident Reconstructions