# Traffic Crash Reconstruction 1

# Develop the foundations for a successful traffic crash reconstruction career.

#### **COURSE CONTENT:**

- Engineering mechanics
- Equations of motion calculations
- Vehicle behavior in collisions
- Principal direction of force analysis
- Introduction to human factors
- Time-distance analysis
- Conservation of momentum
- Oblique & collinear analysis
- Post-collision drag factors
- Newton's Laws of Motion
- Identifying & analyzing road marks
- Driver strategy & tactics
- Eight real-world case studies

Based on the most recent edition of our authoritative textbook, *Traffic Crash Reconstruction*, this course instructs students in analyzing and interpreting information that has been collected at lower levels of a crash investigation in order to describe — in as much detail as possible — a collision and the events leading to the actual impact.

Our teaching format provides the optimum training and practice in necessary reconstructions skills, as students apply the lessons from daily lecture material to real-world case study situations.

After completing Traffic Crash Reconstruction 1, students will be able to reconstruct crash situations using momentum and mechanics.

## **PREREQUISITES:**

Crash Investigation 1; Crash Investigation 2; Vehicle Dynamics

Participants should possess an understanding of physics and math skills that include high-school level algebra, geometry, and trigonometry.

ACTAR MEMBERS EARN: 80 ACTAR CEUs

# **Register Now**

TUMWATER, WASHINGTON Sept. 16 - 27, 2024

## COURSE SPONSOR:

Thurston County Sheriff's Office

# **COURSE LOCATION:**

Thurston County Sheriff's Office 7721 New Market St. SW Tumwater, WA 98501

# TUITION

\$1,295 per person

## REGISTRATION

Use the below QR code to register or visit :

nucps.northwestern.edu/ crashsequence



# Northwestern CENTER FOR PUBLIC SAFETY nucps.northwestern.edu

# **Traffic Crash Reconstruction 2**

Build upon your crash reconstruction knowledge and take your skills to a new level.

# **COURSE CONTENT:**

- Engineering mechanics
- Equations of motion calculations
- Vehicle behavior in collisions
- Principal direction of force analysis
- Introduction to human factors
- Time-distance analysis
- Conservation of momentum
- Oblique & collinear analysis
- Post-collision drag factors
- Newton's Laws of Motion
- Identifying & analyzing road marks
- Driver strategy & tactics
- Eight real-world case studies

Traffic Crash Reconstruction 2 (TCR2) is the fifth and final course in our foundational series and is a continuation of the skills learned in Reconstruction 1. Students receive expert instruction through lecture and daily real-world case studies, which tie lectures to hands-on analysis. Those students who successfully complete this course will possess the core skills for professional traffic crash reconstruction.

In TCR2, students expand on their understanding of crashes and learn to analyze collisions using conservation of energy and delving into special velocity calculations for such situations as vehicle falls, flips, and rollovers. Participants obtain basic skills for analyzing EDR data and how to apply it to traditional reconstructions. They also are introduced to the Monte Carlo Statistical Analysis and learn to solve momentumbased crash sequences using spreadsheet analysis.

TCR2 is a prerequisite to many of our advanced elective courses and is based on the authoritative material from our textbook *Traffic Crash Reconstruction*.

# **PREREQUISITES:**

Crash Investigation 1 & 2; Vehicle Dynamics; Traffic Crash Reconstruction 1. Participants should possess an understanding of physics and math skills that include high-school level algebra, geometry, and trigonometry.

#### ACTAR MEMBERS EARN: 80 ACTAR CEUs

# **Register Now**

**TUMWATER, WASHINGTON** Sept. 30 - Oct. 11, 2024

COURSE SPONSOR:

Thurston County Sheriff's Office

# **COURSE LOCATION:**

Thurston County Sheriff's Office 7721 New Market St. SW Tumwater, WA 98501

**TUITION** \$1,295 per person

## REGISTRATION

Use the below QR code to register or visit : nucps.northwestern.edu/ crashsequence

