

MATH REVIEW FOR CRASH INVESTIGATION

Dates/Location: (Check selection).

_____ Somerset EMS Bldg, September 4-6

_____ Bergen LPS Academy, September 23-25

_____ Gloucester County College, September 25-27

Time: 9:00 am– 3:00 pm

Cost: Free of Charge (Paid for by funding from NJDHTS)

First Name Last Name

Title /Organization

Street Address

City, State, Zip

Work Phone Mobile Phone

Email Address

List Year Completed:

_____ Crash 1/Basic _____ Crash 2/Advanced _____ Vehicle Dynamics

E-Mail, or Fax Registration to: cknezek@kean.edu

Kean University, C. Knezek

School of Natural Sciences, Biology C127

1000 Morris Avenue

Union, NJ 07083

Phone: 908 737-3653

Fax: 908-737-3666

Math Review for Crash Investigation



Fall 2019 Training

Somerset EMS Bldg, September 4-6

Bergen LPS Academy, September 23-25

Gloucester County College September 25-27

Course Topics

Each section will include an explanation of the procedure and practice examples to help prepare students for Crash Reconstruction or conducting crash investigations.

Airborne Crashes

- ⇒ Center of Mass & Travel
- ⇒ Level of Take-off Angles
- ⇒ Unknown Take-Off Angles
- ⇒ Distance of Varying Angles

Critical Speed

- ⇒ Speed Calculations

Momentum

- ⇒ Velocity
- ⇒ FPS or MPH
- ⇒ Crash Types
- ⇒ Scalar Vectors
- ⇒ Measuring Approach & Departure Angles
- ⇒ Calculate "Y" Component

Time Distance

- ⇒ Acceleration-Deceleration Factors
- ⇒ Time Distance Averages
- ⇒ Velocity, Time, & Distance

Work/Energy

- ⇒ Work Energy
- ⇒ Kinetic Energy
- ⇒ Derivation of Momentum Speed Formula
- ⇒ Velocity

Schedule

Classes are held from 9:00 a.m. to 3:00 p.m. Limited space is available, so please register early. Math and Trigonometry Review worksheets will be emailed at time of registration.

Dates

Sections

Day 1

- ⇒ Time Distance Review
- ⇒ Work Energy Analysis

Day 2

- ⇒ Momentum Review
- ⇒ Momentum Problems

Day 3

- ⇒ Critical Speed Review
- ⇒ Airborne Crash Analysis

Description

This course reviews mathematical formulas used for crash reconstruction. Specifically, the following topics will be covered: kinetic energy, velocity, and speed of the vehicle involved in crashes. Speed estimates from simple skids and yaw marks will be calculated, while data is used to conduct collinear momentum analysis. Speeds will also be calculated for vehicles that left the road surface, along with examination of other appropriate formulas.

Instructors

Somerset: D. DiStaso, R. Maxwell, W. Pauli

Bergen: J. Cofone, A. Pisani

Gloucester: P. Forchion, N. Schock