CENTER FOR LAW ENFORCEMENT EDUCATION
TRAINING CATALOG FOR 2015-16

PREPARED BY:
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Mount Aloysius College
Course content can be tailored to your specific needs.

**COLLISION TRAINING**

**Services Provided:**

- Collision analysis involving all types of motor vehicles
- Basic Level Collision Training, commonly referred to as On-Scene - Homicide by Motor Vehicle Training. (Two-week program)
- Advanced Level Collision Training (Two-week program)
- Collision Reconstruction Training (Two-week program)
- Pedestrian & Bicycle Analysis (One to five day program)
- Emergency Vehicle Issues and Analysis (One or two day program)
- Commercial Vehicle Accident Investigation & Reconstruction (course subject matter varies, call for details)
- Commercial Vehicle & Operator DOT Requirements
- Motorcycle Collision Analysis (One to five day program)
- Lamp Examination Analysis (One to two day program)
- Nighttime Collision Analysis (One to three day program)
- Conservation of Linear Momentum (One to three day program)
- Time & Distance Studies (One or two day program)
- Human Factors and Reactions
- Laser and Scale Diagramming
- Vehicle Restraint Systems
- Vehicle Computer Analysis
- Under Cover Operations/Investigations (Donnie Brasco Series)
- Courtroom Survival (Author Marty Brhel)
Training Workshop/Seminars:

C- 100: On-Scene Collision Investigation and Homicide by Motor Vehicle:
Basic Level - 10 - Day Program:  Registration Fee:  $895.00/student

This course lays the foundation for the professional collision investigator. The course is designed to provide the participants with the awareness and skills necessary to properly conduct a thorough vehicle collision investigation and gather the related physical evidence at the collision scene.

The course utilizes a mix of instructional techniques, including lectures, case studies, projects, testing, and field exercises. The knowledge gained will enhance the student’s investigative abilities and allow for a more professional and expert courtroom presentation and testimony.

The course curriculum includes the following:

Course Length: 10 Days (80 Hours)

a) Classification of Traffic Collision
b) Series of Collision Events
c) Physical Evidence from the Traffic way
d) Collision Photography
e) Measuring and Diagramming Collision Scenes
f) Scale Diagrams
g) Interviewing Drivers and Witnesses
h) Minimum Speed Determination from Skid Marks
i) Use of Traffic Template
j) Analysis Information and Case Preparation
k) Principles of Mathematics Used in Collision Investigation
## C-100: On-Scene Collision Investigation and Homicide by Motor Vehicle:

### Week One:

**Ci: 101**  
Course Length - 10-days

<table>
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<tr>
<th>Time</th>
<th>Monday</th>
<th>Classroom/Homework Assignments</th>
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<td>0800 - 0900</td>
<td>Orientation &amp; Pre-test</td>
<td>Pages 1 - 60</td>
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<tr>
<td>0900 - 1100</td>
<td>Intro to Acc. Investigation</td>
<td>Pages 61 - 72</td>
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<tr>
<td>1100 - 1200</td>
<td>Class of Collisions</td>
<td>Pages 61 - 72</td>
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<tr>
<td>1200 - 1300</td>
<td>Lunch</td>
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<tr>
<td>1300 - 1500</td>
<td>Class of Collisions</td>
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<tr>
<td>1500 - 1700</td>
<td>Series of Events</td>
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<tr>
<th>Time</th>
<th>Tuesday</th>
<th>Classroom/Homework Assignments</th>
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<tbody>
<tr>
<td>0800 - 0900</td>
<td>Quiz from Monday session</td>
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<tr>
<td>0900 - 1000</td>
<td>Definitions &amp; Series of Events</td>
<td>Pages 144-230</td>
</tr>
<tr>
<td>1000 - 1200</td>
<td>Physical Evidence from Roadway</td>
<td>Pages 144 -230</td>
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<tr>
<td>1200 - 1300</td>
<td>Lunch</td>
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<tr>
<td>1300 - 1400</td>
<td>Physical Evidence from Roadway</td>
<td>Pages 231 - 326</td>
</tr>
<tr>
<td>1400 - 1600</td>
<td>Physical Evidence from the Vehicle</td>
<td>Pages 231 -326</td>
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<tr>
<td>1600 - 1700</td>
<td>Math Review (Beginning of speed Equations)</td>
<td>Homework Project</td>
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<table>
<thead>
<tr>
<th>Time</th>
<th>Wednesday</th>
<th>Quiz, 1c, 2c, 3c, 1h, 2h</th>
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<tbody>
<tr>
<td>0800 - 0900</td>
<td>Evidence from the Highway</td>
<td>Quiz</td>
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<tr>
<td>0900 - 1200</td>
<td>Estimating Vehicle Speed</td>
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<td>1200 - 1300</td>
<td>Lunch</td>
<td></td>
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<tr>
<td>1300 - 1700</td>
<td>Estimating Vehicle Speed, Coefficient of</td>
<td>4c, 5c 6h</td>
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<td>Friction Values, Minimum Speed - Velocity</td>
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<thead>
<tr>
<th>Time</th>
<th>Thursday</th>
<th>6c, 7c, 8c, 3h, 4h</th>
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<tbody>
<tr>
<td>0800 - 0900</td>
<td>Quiz Estimating Vehicle Speed</td>
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<tr>
<td>0900 - 1200</td>
<td>Estimating Vehicle Speed</td>
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<tr>
<td>1200 - 1300</td>
<td>Lunch</td>
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<tr>
<td>1300 - 1400</td>
<td>Estimating Vehicle Speed</td>
<td>9c</td>
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<tr>
<td>1400 - 1600</td>
<td>Speed Field Project</td>
<td>(weather dependent)</td>
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<tr>
<td>1600 - 1700</td>
<td>Estimating Vehicle Speed, Combined Speed</td>
<td>Homework Project</td>
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<td>Radius, and Critical Speed</td>
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<th>Time</th>
<th>Friday</th>
<th>10c, 11c, 5h, 7h</th>
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<tbody>
<tr>
<td>0800 - 0830</td>
<td>Field Project Review</td>
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<tr>
<td>0830 - 1200</td>
<td>Estimating Vehicle Speed</td>
<td></td>
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<tr>
<td>1200 - 1300</td>
<td>Lunch</td>
<td></td>
</tr>
<tr>
<td>1300 - 1700</td>
<td>Estimating Vehicle Skid, Distance to Skid,</td>
<td>Weekend Project</td>
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<td>Time to Skid, Reaction Distance, Formula</td>
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<tr>
<td></td>
<td>Projects</td>
<td></td>
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</table>
C 100: On-Scene Collision Investigation and Homicide by Motor Vehicle - Cont':

**Week Two:**

**Monday:**

- 0800 - 0900: Homework & Math Review
- 0900 - 1200: Traffic Template
- 1200 - 1300: Lunch
- 1300 - 1400: Traffic Template
- 1400 - 1700: Measuring & Diagramming (Homework Assignment)

**Tuesday:**

- 0800 - 0830: Traffic Template (Quiz)
- 0830 - 0900: Project Review
- 0900 - 1100: Photography (Reading Project 6)
- 1100 - 1200: Measuring & Diagramming
- 1200 - 1300: Lunch
- 1300 - 1700: Measuring & Diagramming (Homework Assignment)

**Wednesday:**

- 0800 - 0830: Photography (Quiz)
- 0830 - 0900: Math Review
- 0900 - 1200: Scale Diagramming
- 1200 - 1300: Lunch
- 1300 - 1700: Field Projects (Weather Dependent Homework)

**Thursday:**

- 0800 - 0900: Field Project Review (Reading Project 7)
- 0900 - 1000: Math Review
- 1000 - 1200: Human Factors/Elements (Pages 101 - 143)
- 1200 - 1300: Lunch
- 1300 - 1500: Interviewing
- 1500 - 1700: Misc. Issues

**Friday:**

- 0800 - 1000: Preparing your case
- 1000 - 1200: Final Examination
- 1200 - 1300: Lunch
- 1300 - 1600: Final Examination - Continues
- 1600 - 1700: Closing Remarks
C 200 Advanced and Technical Collision Analysis Investigation:

**Course Length:** 10 Days (80 Hours)  
**Registration Fee:** $895.00/student

The second of the three levels of core traffic collision investigation courses, this course is designed for the experienced police officer, supervisor, or traffic homicide investigator who has collision investigation training and is proficient in collision investigation and evidence gathering, measuring, scaling diagramming and obtaining minimum speed from skid marks. Applicants for this course must have successfully completed the On-Scene/Homicide by Vehicle Collision Investigation training course or equivalent training from a recognized training institution.

The course curriculum includes the following:

a) Speed/Velocity Equations  
b) Time and Distance Evaluation Methodology  
c) Pedestrian Studies  
d) Vehicle Acceleration Studies  
e) Diagramming  
f) Basic Motorcycle Collision Investigation  
g) Basic Commercial Vehicle Collision Investigation  
h) Field Projects  
i) Lamp Examination  
j) Tire Examination  
k) Vehicle Dynamics  
l) Human Factors

*(Prerequisite - On-Scene/Homicide by Vehicle Collision Investigation)*
C 200  Advanced Collision Analysis/Investigation:  Week One

Monday - Week One:

0800 - 0900  Introduction/Administrative Matters
0900 - 1000  Pre-test
1000 - 1200  Falls/Vaults
1200 - 1300  Lunch
1300 - 1400  Falls/Vaults
1400 - 1700  Lamp Examination  Homework Assignment

Tuesday:
0900 - 0815  Administrative
0815 - 0900  Quiz - Lamp Examination
0900 - 1200  Acceleration/Deceleration
1200 - 1300  Lunch
1300 - 1700  Tires  Homework Assignment

Wednesday:
0800 - 0815  Administrative
0815 - 0900  Quiz/Tires
0900 - 1200  Falls/Vaults Quiz
1200 - 1300  Lunch
1300 - 1430  Time Analysis
1430 - 1500  Acceleration/Deceleration Outside Project  Homework

Thursday:
0800 - 0815  Administrative
0815 - 0900  Quiz/Acceleration/Deceleration
0900 - 1200  Distance and Velocity
1200 - 1300  Lunch
1300 - 1500  Motorcycle Collisions
1500 - 1700  Commercial Vehicle Collisions  Homework

Friday:
0800 - 0815  Administrative
0815 - 0900  Quiz/Distance
0900 - 1000  Quiz/Speed and Velocity
1000 - 1200  Time & Distance Projects
1200 - 1300  Lunch
1300 - 1500  Time & Distance Projects
1500 - 1700  Acceleration/Deceleration Project and Review  Weekend Assignment
Monday - Week Two:

0800 - 0815  Administrative
0815 - 0900  Project Review
0900 - 1200  Low speed impacts & Insurance Fraud
1200 - 1300  Lunch
1300 - 1700  Time & Distance Projects

Tuesday:

0800 - 0815  Administrative
0815 - 1200  Time & Distance Projects
1200 - 1300  Lunch
1300 - 1700  Advanced Drawing & Advanced Drawing Projects

Wednesday:

0800 - 0815  Administrative
0815 - 1200  Vehicle Damage Profiling
1200 - 1300  Lunch
1300 - 1500  Vehicle Damage Outside Project  Weather permitting
1500 - 1700  Diagram Time & Distance Project  Homework

Thursday:

0800 - 0815  Administrative
0815 - 0900  Quiz/Crush
0900 - 1000  Time & Distance Projects
1000 - 1200  Quiz/Time & Distance
1200 - 1300  Lunch
1300 - 1700  Photogrammetry

Friday:

0800 - 0900  Administrative
0900 - 1100  Human Factors
1100 - 1200  Misc. Matters
1200 - 1300  Lunch
1300 - 1700  Final Examination & Closing Remarks
C 300  Traffic Collision Reconstruction & Collision Investigation:

**Course Length:** 10 Days (80 Hours)  **Registration Fee:** $895.00/student

This is the final level of the three core traffic collision investigation courses. Reconstruction contains highly technical subject matter, including interpreting evidence from a collision scene and using mathematical computations to determine causation factors of a collision. Officers will use diagramming tools, measuring instruments and photographs, as well as elements of algebra, geometry, and trigonometry to resolve cases.

**The course curriculum includes the following:**

a) Staged collision situations  
b) Diagramming projects  
c) Speed analysis  
d) Effects of weight shift in braking  
e) Effects of anti-skid braking  
f) Conservation of Linear Momentum and related project analysis  
g) Direction of pre & post travel  
h) Initial contact points  
i) Position of the vehicle on the roadway  
j) Collision Analysis from Reports, diagrams, statements, medical records  
k) .....and more

Because of the highly technical subject matter, it is mandatory that each applicant have successfully completed the On-Scene and Advanced collision investigation training courses or equivalent training from a recognized training institution.

(Prerequisite - Advanced and Technical Analysis Collision Investigation)
Monday:

Monday - Week One:

0800 - 0900  Introduction/Administrative Matters
0900 - 1000  Pre-test
1000 - 1200  Review information relating to Time & Distance Falls/Vaults, Velocity, Speed, Coefficient of Friction
1200 - 1300  Lunch
1300 - 1700  In-Line Conservation of Momentum (COM)  Homework Assignment

Tuesday:

0800 - 0815  Administrative
0815 - 0900  Review of In-Line COM
0900 - 1200  COM - Right Angle Impacts
1200 - 1300  Lunch
1300 - 1530  COM
1530 - 1700  Projects on COM  Homework Assignment

Wednesday:

0800 - 0815  Administrative
0815 - 1200  COM - Angular Impacts
1200 - 1300  Lunch
1300 - 1700  COM - Angular Impacts  Homework Assignment

Thursday:

0800 - 0815  Administrative
0815 - 1200  Staged Situations
1200 - 1300  Lunch
1300 - 1700  Speed Analysis  Homework Assignment

Friday:

0800 - 0815  Administrative
0815 - 1200  Effects of Weight Shift in Braking
1200 - 1300  Lunch
1300 - 1700  Understanding Occupant Injury  Weekend Project
Monday:

0800 - 0815  Administrative
0815 - 1200  Vector Sum Analysis
1200 - 1300  Lunch
1300 - 1700  Vector Sum Analysis

Tuesday:

0800 - 0815  Administrative
0815 - 1200  Vector Sum Analysis
1200 - 1300  Lunch
1300 - 1700  Combining Vector Sum and COM

Wednesday:

0800 - 0815  Administrative
0815 - 1200  Determining Cause Project
1200 - 1300  Lunch
1300 - 1700  Work Energy

Thursday:

0800 - 0815  Administrative
0815 - 1200  Steering Overcorrection
1200 - 1300  Lunch
1300 - 1500  Nighttime Collision Analysis
1300 - 1700  Using Technology

Friday:

0800 - 0900  Administrative
0900 - 1000  Misc. Matters
1000 - 1200  Final Examination - Part 1
1200 - 1300  Lunch
1300 - 1700  Part 2 of the Final Examination & Closing Remarks
**C 400 Advanced Technical Collision Investigation: (Optional) 5-Days:**

**Course Number:** C-400  
**Course Length:** 5 Days (40 Hours)  
**Registration Fee:** $695.00/student

Considered optional, this course is considered at times to be the fourth of the core collision investigation courses. The course extensively covers Conservation of Linear Momentum and Vector Sum Analysis.

These topics are very technical and are most often included in Collision Reconstruction Courses. This course is designed to allow more attention to the subject matter and more time for students to comprehend the material being instructed.

**C 400 Advanced Technical Collision Investigation: (5-Days)**

**Monday - Week One:**

- 0800 - 0900  Introduction/Administrative Matters
- 0900 - 1200  Conservation of Momentum (COM)
- 1200 - 1300  Lunch
- 1300 - 1700  COM - In line

**Tuesday:**

- 0800 - 0815  Administrative
- 0815 - 1200  COM - Right Angle
- 1200 - 1300  Lunch
- 1300 - 1530  COM
- 1300 - 1700  COM - Angular Collisions

**Wednesday:**

- 0800 - 0815  Administrative
- 0815 - 1200  COM - Angular Impacts
- 1200 - 1300  Lunch
- 1300 - 1700  COM - Angular Impacts

**Thursday:**

- 0800 - 0815  Administrative
- 0815 - 1200  Vector Sum Analysis
- 1200 - 1300  Lunch
- 1300 - 1700  Vector Sum

**Friday:**

- 0800 - 0815  Administrative
- 0815 - 1200  Vector Sum Projects
- 1200 - 1300  Lunch
- 1300 - 1700  Final Examination and Closing Remarks
NOTE: Upon request; several of the blocks of instruction can be introduced as part of the Advanced and Reconstruction training. This is dependent upon the needs of the host agency.

Based upon specific course needs, SCG reserves the right to modify/incorporate the above-topics into the Advanced Level course.

**CM 450 Motorcycle Collision Investigation:** 3.5 credits

**Course Length:** 3 Days (24 Hours)  
**Registration Fee:** $395.00/student

This three-day program is designed for the experienced police officer, supervisor, or traffic homicide investigator who wants to better understand the handling characteristics, design, and speed factors affecting the reconstruction of motorcycle-involved collisions. Participants are involved in outdoor demonstrations and case projects.

The course curriculum includes the following:

a. Identifying Motorcycle Components  
b. Analyzing Physical Evidence  
c. Identifying Collision Causation  
d. Human Factor Behavior  
e. Field Testing – Slide to Stop  
f. Speed Calculations and Techniques  
g. Helmets and Safety Equipment  
h. Damage Analysis

(Prerequisite - Advanced Collision Analysis)

**Registration Fee:** $395.00/student

**CL 500 Lamp Examination Workshop:** 1.5 credits

**Course Length:** 1 Day (8 Hours)  
**Registration Fee:** $130.00/student

The student will examine the various types of vehicle lamps. This workshop will assist the participant in making a proper determination as to the status of the lamp at the moment of impact. This workshop includes an in-class lamp lab exercise.
CP 525 Pedestrian Crash Analysis:

3.5 credits

Course Length: 3 Days (24 Hours)  
Registration Fee: $395.00/student

Pedestrian and bicycle crashes are one of the most frequent types of injurious crashes. Because of their unique nature, special techniques are required to investigate and reconstruct these types of events.

This course addresses the dynamics involved in pedestrian and bicycle traffic crashes. From reaction times to victim injury analysis to environmental factors, you'll learn to recognize and interpret the evidence and correlate it with the collision sequence.

In addition to classroom instruction, practical exercises and staged crash situations will be used to give you “hands-on” experience.

Topics include:

- Pedestrian crash concerns
- Pedestrian collision dynamics
- Your analysis: objective, subjective and performance
- The proper collection of data
- Pedestrian conspicuity
- Reaction time/human factors
- Reconstruction/investigative/analysis techniques
- Bicycle collision
- Hit and run investigation techniques

Note: You should bring a scientific calculator and a traffic template with you.

Prerequisite: You must have completed the On-Scene Traffic Crash/Traffic Homicide Investigation course or its equivalent.

Audience: Law enforcement and private traffic crash investigators, claims adjusters, engineers, attorneys, safety officers, military investigative personnel, animators and graphic designers
**CT 550 Tire Forensics Workshop:** 1.5 credits

**Course Length:** 1 Day (8 Hours)  
**Registration Fee:** $130.00/student

This workshop is designed for Advanced Traffic Collision Investigators. Training emphasis is based on collision prevention and possible tire failure as a cause or result of a traffic collision.

The course curriculum includes the following:

- a. Tire Design
- b. Tire Composition
- c. Tire Types
- d. Tire Failure-Causes and Preventions
- e. Location and Interpretation of Tire Identifications Stamping

**CC 600 Computer Aided Diagramming Crash Zone:** 7 credits

**Course Length:** 5 Days (40 Hours)  
**Registration Fee:** $695.00/student

This course is an intensive “hands-on” program which enables students to work with the many operational uses of the Crash Zone diagramming software program. The student will be able to utilize this software program to develop case diagrams and related demonstrative evidence for court use.

**NOTE:** Course is limited to 15 students. Each student MUST provide their own computer with a MOUSE for classroom use. The mouse is needed for drawing exercises in class. CLEE will provide a classroom version of the software program.

**CN 650 Nighttime Visibility Analysis:** 1.5 credits

**Course Length:** 1 Day  
**Registration Fee:** $130.00/student

This workshop examines issues of investigating vehicular collisions that occur in darkness. It includes a discussion of lighting, movement, and pedestrian attire, as they pertain to their impact with moving vehicles. It covers various nighttime situations and considerations involved in both single and multiple vehicle collisions.

The course curriculum includes:

- a. Differences Between Day and Night Vision
- b. Human Subjective Judgment in Visibility Issues
- c. Acuity, Sensitivity and Depth Perception of Human Vision
- d. Speed of Recognition During Nighttime Activities
**CB 700 Seat Belts and Occupant Kinematics:** 1.5 credits

**Course Length:** 3 Days (24 Hours)  
**Registration Fee:** $395.00/student

This three-day course covers components, design, and use of both active and passive restraint systems in motor vehicles. Also presented is advanced information on the subject of Occupant Kinematics which is the examination of the movement of humans during collisions. It provides valuable information that can be useful in determining the seating positions of occupants in a collision. It is designed for the experienced police officer, supervisor, or vehicle collision investigator.

**The course curriculum includes the following:**

a. Seat Belt Design and Proper Usage  
b. Seat Belt Examination  
c. Restraint System Failure Analysis  
d. Vehicle Examinations  
e. Medical Terminology  
f. Reviewing and Understanding Autopsy Reports  
g. Occupant Kinetics and Injury Analysis  
h. Driver Determination  
i. Evidence Documentation

**CV 100 Commercial Vehicle Investigation I:** 10 credits

**Course Length:** 10 Days (80 Hours)  
**Registration Fee:** $995.00/student

This comprehensive course combines presentations by commercial vehicle component manufacturers with insights from experienced commercial vehicle collision investigators. This combination of instructional expertise is designed to improve knowledge and skills of officers who inspect commercial vehicles prior to and/or after a crash. Emphasis is placed on component design and normal operational performance, indications of normal and abnormal wear, and component failure. This course provides an understanding of commercial vehicle performance characteristics necessary to apply appropriate collision investigative techniques and procedures based upon inspection of the vehicle.

**The course curriculum includes the following:**

a. Tractor and Trailer Nomenclature  
b. On-Board Computer Data, and Log Books  
c. Brake System Configuration and Operation  
d. Wheels, Rims and Tires  
e. Steering, Suspension and Frames  
f. Trailer Coupling Devices - Fifth Wheel, Dollies  
g. Cargo Tie-Downs and Weight Distribution

**NOTE:** All commercial vehicle investigation courses can be taken in any order.
**CV200  Commercial Vehicle Investigation II:** (Investigation Course) **2.5 credits**

**Course Length:** 2.5 Days (20 Hours)  
**Registration Fee:** $395.00/student

The course is designed to assist the collision investigator in identifying and understanding the air brake system and the system’s braking efficiency. This course includes field projects in which commercial vehicles are skidded to determine the vehicle’s braking efficiency.

**The course curriculum includes the following:**

a. Air Brake System (s-cam, Wedge)  
b. Anti-Lock Air Brake Systems  
c. Air System Components  
d. Component Failure  
e. Brake Efficiency  
f. Brake Imbalance  
g. Stopping Distances  
h. Field Projects  
i. Case Studies

**CV300  Commercial Vehicle Investigation III:** (Driver Responsibility) **2.5 credits**

**Course Length:** 2.5 Days (20 Hours)  
**Registration Fee:** $395.00/student

This course is designed to assist the police investigator in determining the accuracy and completeness of the commercial vehicle driver's log.

**The course curriculum includes the following:**

a. Log Book Composition  
b. Driver Documentation  
c. Carrier Documentation  
d. Log Book Receipts and Data  
e. Electronic Log Book
**CV400 Commercial Vehicle Investigation IV: (CMV Equations - Dynamics)**

**Course Number:** CV-405  
**2.5 credits**  
**Course Length:** 3 Days (24 Hours)  
**Registration Fee:** $395.00/student

This course covers the investigation of rollover, jackknife, underside and trail swing. It includes a technical examination of suspension systems.

The course curriculum includes the following:

a. Commercial Vehicle Suspension Systems  
b. Determining the Center of Mass  
c. Speed Determination in Rollover Collisions  
d. Causes and Evidence of Trailer Swing  
e. Trailer Under-ride Evidence  
f. Trailer Under-ride Time and Distance Factors

**CV500: Commercial Vehicle Inspection & Collision Analysis: V:**

**Course Number:** CV-500  
**5 credits**  
**Course Length:** 5 Days (40 Hours)  
**Registration Fee:** $345.00/student/individual course or both courses $795.00

This course covers the investigation of rollover, jackknife, underside and trail swing. It includes a technical examination of suspension systems.

The course curriculum includes the following:

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<th>Inspection of the CMV: 2.5 days</th>
<th>Commercial Vehicle Collision Analysis 2.5 days</th>
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<tbody>
<tr>
<td>• Tractor and trailer nomenclature</td>
<td>• Air brake systems (s-cam, Wedge)</td>
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<tr>
<td>• Types of carriers</td>
<td>• Anti-lock air brake systems</td>
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<td>• Coupling devices</td>
<td>• Air system components including suspension systems</td>
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<td>• Axles</td>
<td>• Component failure</td>
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<tr>
<td>• Air brake components</td>
<td>• Brake efficiency &amp; braking imbalance</td>
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<td>• Tires &amp; wheels and rims</td>
<td>• Brake imbalance</td>
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<td>• Steering system</td>
<td>• Stopping distances &amp; time and distance</td>
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<tr>
<td>• On-Board computer data, and log books</td>
<td>• Center of mass</td>
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<tr>
<td>• Brake system configuration and operation</td>
<td>• Under-ride</td>
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<tr>
<td>• Steering, Suspension and Frames</td>
<td>• Hydroplaning</td>
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<td>• Trailer coupling services - fifth wheel, dollies</td>
<td>• Braking Performance of trucks</td>
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<td>• Cargo tie-downs and weight distribution</td>
<td>• Weight Shift Issues</td>
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<td>• Driver &amp; vehicle inspection</td>
<td>• Stability of articulated vehicles</td>
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<td>• Stopping distances</td>
<td>• Case studies</td>
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<td>• Hours of service</td>
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CL 100 Laser Measuring Device Basic Operation LTI: 3.5 credits

Course Length: 3 Day (24 Hours)

This course is designed to be an operator orientation course for the laser measuring devices manufactured by LTI, utilizing the CAD Zone software only. The course will allow the students to utilize the many features of the devices in a one-man operation and obtain the necessary information to download for diagramming.

NOTE: Each student must have a computer and a mouse for classroom use. The mouse is needed for drawing exercises in class. Student will utilize their own department’s laser equipment during the course.

CL 200 Total Station Measuring Device: 5 credits

Course Length: 5 Days

This course will cover the operational procedures of utilizing the Total Station collision scene measuring device. This "hands-on" training will allow the students to work as a team during the field exercises and obtain the needed download information from the collision scene. Training is offered for Sokkia models utilizing the CAD Zone software only.

NOTE: Each student must have a computer for classroom use. Student will utilize their own department's Total Station Measuring Device during the course.

CR-100: Undercover Operations - (AKA Donnie Brasco Series) - (Shorter programs are available upon request)

Course Number: CR-100
Course Length: 3 Days (24 Hours)  Registration Fee: Call for Quote

This course is taught by Joe Pistone, (aka Donnie Brasco). You may have seen the movie, but now you have the opportunity of being instructed by America's most experienced under-cover agent/investigator and his team.

Through the intensive teaching seminars, Joe Pistone assembles the most experienced individuals in the field of deep cover operations to assist him in presenting the teaching and practical workshop sessions. Each has a minimum of over twenty-five years with the Federal Bureau of Investigation with at least twenty of those years in undercover assignments. He brings together the top undercover law enforcement minds with a highly experienced medical practitioner to cover all aspects of the undercover experience. This includes the behavioral and psychological considerations and as well as the socio/psychological ramifications of working deep-cover assignments.

Joe Pistone brings a multidimensional and invaluable perspective to undercover training that has been recognized, utilized and heralded, throughout the world. All instructors assisting him in the training are effectively interchangeable depending on availability. Ranges 1 - 5 days.
The course curriculum includes the following:

• Skills of the Undercover Agent
• Legend Building / Backstopping
• Art of Negotiations
• Non-verbal Detection of Deception
• Technical Equipment
• Behavioral Analysis
• Weapons
• Legal Issues / Department Policies
• Testimony / Recording Information
• Undercover Safeguards
• Roll Playing
• Problem Areas in Undercover Work
• Case Study
• Handling the informant and informant development
• Behavioral Aspect of Undercover Work
• Characteristics of an Undercover Agent
• Personalities
• Multidimensional
• Other Qualities
• Emerging from the Operation in Good Condition
• Neutralizing the Target (I.E. Arrest & Conviction)
• Achieving Success as an Undercover Agent
• Getting to Know Your Target
• Discussion of Personality Types That One is Most Likely to Encounter While Working Undercover.
• Problems That May Arise As a Result of Undercover Work and How to Deal With Them
Effective courtroom testimony by law enforcement officials is a must in today’s world of case prosecution. The work done by law enforcement to make a case is futile if prosecution involved in the case does not understand your case, or if you take the commonly recognized shortcuts that the attorneys are aware of as well as you are. Thus you are not able to achieving a successful conviction.

A solid prosecution depends in part on competent and adept presentation by the law enforcement officer who is on the witness stand to the judge and/or jury hearing and deciding the case in the courtroom.

Most law enforcement officers receive little, if any, formal training regarding courtroom testimony. Most officers learn to testify at the lower courts as it relates to traffic or minor infractions. Once they go to a jury trial, a non-jury trial, they find out it is more structured and sometimes intimidating.

As a result, testifying can oftentimes be an anxiety-producing experience that leaves the officer doubting him/herself and wishing they could have another chance at making it right.

The courtroom is a different world. The distinction of how effective your sworn testimony can be easily overlooked by the law enforcement official who underestimates the defense. Be careful for as the saying goes, the other side is capable of doing what it promises. Never underestimate the opposing side.

Since television shows and other media sources are instant, and numerous television shows are top rated, they have shaped the public’s perception of what a law-enforcement officer on the witness stand needs to be able to testify to. This is an uphill battle for today’s police officer.

The Courtroom Testimony training course focuses on bringing the law enforcement officer psychologically into the courtroom.

This one day course will teach officers the do’s and don’ts of testifying. They will learn how and why a personal relationship must be made with the judge/jury, and how to recognize and shield their personal credibility. Officers will learn when and why they may be called to the witness stand and the importance as well as the limitations of testifying. Preparation tips will be provided to reduce the risks essentially associated with testifying. In addition, specific procedures will be presented to teach officers how to counter common/favorite tactics used by defense attorneys.

The course curriculum includes the following:

• Relating with the Judge & Jury
• Testimony credentials
• Ordinary errors made
• Defense Attorney traps or ambush
• Preparation for the case, mentally and professionally
• Reducing the worry of testifying
• Non-verbal communication
• Articulation of Responses
• Professional report writing
• What are your limitations on testifying
• What to expect from your prosecutor
• How important are courtroom ethics
Course Site Requirements:

- All courses require the student to have sufficient desk/table top space to work multiple tasks involving drawing and math projects. Large tables with comfortable chairs would be appreciated.

- All courses will require outside projects for activities like field measuring (On-Scene & Advanced Level Courses).

- **On Scene:** For skidding purposes, a "test car" vehicle will be needed for the field project during the On-Scene Course.

- **Advanced:** A vehicle to use as a "test car" will be needed for the field project during the Advanced Course for striking of the pedestrian. This vehicle most likely will sustain windshield and hood, headlamp, or other related damages. A vehicle capable of reaching speeds of 40 MPH is all that is necessary. It may be a salvage vehicle.

- **Reconstruction:** Everything needed in both the On-Scene and Advanced courses.

- The instructors will coordinate any other course needs with the host prior to and during the courses.

- The courses will utilize these instructional items: computer data projector, flip chart, and white board or chalk board. If the host does not have these items on-site, SCG requires a ten (10) day notice in order to secure and transport the item(s) to the course site.
Student Materials and Course Information:

- Courses use various lectures, power point presentations, projects/examples, field projects, textbook, homework, and all appropriate student aids to assist the student in successfully completing the training program.

- Each student will be given a course textbook, traffic template, and drawing compass that will be used during the course. These items will become property of the student.

- Traffic Manual for this training program will be the Traffic Accident Investigation Manual, by R.W. Rivers.

- Throughout the course there will be various quizzes and a final examination. To successfully complete the program, the student must be able to maintain a minimum score of 80% over-all.

- Each student will be given a copy of the Collision Investigation Formulas Sheet.

- Students will have course reading assignments and be given copies of the instructor presentation for notes.

- Students will have various classroom and homework projects for various topics that are instructed throughout this training program.

- Students shall attend a minimum number of hours to pass this course. They must attend 95% of the instructional hours.
Instructor Information:  (Subject to change dependent upon the training class)

Rick Varner

Mr. Varner is the former Executive Director of the Pennsylvania Institute for Law Enforcement (ILEE), a position he held for more than 22 years. Mr. Varner is a certified police instructor and training expert, his specialty being vehicle collision and alcohol-related training programs. With more than 28 years of instructional experience, he has instructed courses both domestic and international. Mr. Varner is also a former police officer with a Pennsylvania municipal police agency and is currently a private traffic safety consultant and the co-author of two textbooks on Commercial Vehicle Accident Investigation and Reconstruction. These two reference textbooks are sold nationally and internationally by Lawyers and Judges Publishing Company. Mr. Varner brings years of educational and practical experience to the SCG training programs.

Michael Hanik, Jr.

Mr. Hanik is a staff instructor and served as a Traffic Safety Training Specialist with the Pennsylvania Department of Education's Institute for Law-Enforcement Education. Mr. Hanik is a certified police instructor, his primary specialty being vehicle collision training programs. With more than 23-years of instructional experience, Mr. Hanik is also a retired police officer of the Geistown Police Department.

Dan Ferrick:

Mr. Ferrick is a former staff instructor and served as a Traffic Safety Training Specialist with the Pennsylvania Department of Education's Institute for Law-Enforcement Education. Mr. Ferrick is a certified police instructor, his primary specialty being vehicle collision training programs. With more than 23-years of instructional experience, Mr. Ferrick is also a retired corporal with the Pennsylvania State Police.

Dr. Walter Kilareski:

Dr. Kilareski is a Professor Emeritus of Civil Engineering, Penn State University. Dr. Kilareski has authored text books on highway design and has been active in the field of accident investigation and training for more than 30-years. He has served as an adjunct instructor for the Pennsylvania Department of Education's Institute for Law-Enforcement Education Program. Dr. Kilareski has trained and work for many government agencies throughout his career.

Dennis McGee:

Mr. McGee has retired from the Federal Motor Carrier Safety Administration (FMCSA) where he served as a Special Agent-Safety Investigator form 1979 - 2008. During the time with the FMCSA he served more than 13-years as the state program specialist for Pennsylvania, 7-years as the federal program specialist, and over 9-years as a safety inspector for FMCSA.
Prior to his time with FMCSA, he served 20-years with the Pennsylvania State Police in from 1969 - 1979 after retiring he then joined with FMCSA.

Mr. McGee has a BA degree from Mercyhurst College - 1974, and has earned a MA from Gannon University, Erie in 1976.

Other instructor bio's are available upon request.

Contact Information:

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