



# Advanced Traffic Crash Investigation

(80 Hours)

## SECOND IN A SERIES OF THREE COURSES

Building upon the theories and techniques learned in IPTM's *At-Scene Traffic Crash/Traffic Homicide Investigation* course, this class will delve into the advanced concepts of traffic crash investigations.

More complex vehicle dynamics like acceleration/deceleration, factor, rate and airborne situations will be explored. You will learn to estimate speeds from falls, vaults, and flips and the calculation of kinetic energy and linear momentum. You'll also learn to evaluate vehicle lamps, tires, and damage to help determine vehicle behaviors during the collision.

Much of the coursework will be spent using acceleration/deceleration factors and perception/reaction times to determine time/distance relationships for colliding vehicles.

### Topics include:

- Speed estimates from kinetic energy, skidmarks, scuffmarks and airborne situations
- Vehicle dynamics and motion

- Time, distance, and motion equations
- Conservation of momentum equations
- Center of mass calculation
- Vehicle lamp examination
- Tire damage evaluation
- Vector sum analysis

**Note:** If you are registering for this course, please complete the "Advanced Traffic Crash Investigation Questionnaire" found on page 2 and return it with your registration.

**Prerequisite:** You must have completed IPTM's *At-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

**Course Fee:** \$950

\* For Florida Officers, IPTM's *Advanced Traffic Crash Investigation* course qualifies for 80 hours of Salary Incentive Credit by the FDLE Criminal Justice Standards and Training Commission.

### COURSE FEE

The course fee includes tuition, a student reference manual and study materials. We accept checks, cash, agency purchase orders and credit cards. Credit card payments may be made online using your Visa, MasterCard, Discover or American Express card.

### REGISTRATION

Register online at [www.iptm.org](http://www.iptm.org). A minimum number of registrations must be received for a class to run as scheduled. When the minimum criterion has been met, written confirmation will be mailed, faxed, or emailed to you.

**Please do not make airline reservations until you receive written notification confirming that the course will run as scheduled.**

### REFUND POLICY

A 10% administrative fee will be assessed to all refunds. In lieu of a refund, student substitutions can be made or a credit can be issued for a future course.

### TRANSPORTATION AND LODGING

Most locations are served by several major airlines. Ground transportation, food and lodging are the responsibility of the student. However, hotels in the listed areas offer a special rate to IPTM program participants. For more information, please visit our website at [www.iptm.org](http://www.iptm.org) or call us at (904) 620-IPTM.

### CONTINUING EDUCATION CREDITS

Continuing Education Units (CEUs) are available through IPTM. Please call us at (904) 620-IPTM for details.

To register for this course online, please visit our website at:

[www.iptm.org](http://www.iptm.org)

# Advanced Traffic Crash Investigation Course Questionnaire

The benefit you derive from the course is determined by your having satisfied the prerequisites of the course. *Questionnaire must be completed when submitting registration form.*

	YES	NO
1. Have you successfully completed an <i>At-Scene Traffic Crash/Traffic Homicide Investigation (80 hours) course or its equivalent?</i> .....	<input type="checkbox"/>	<input type="checkbox"/>

**2. Are you familiar with the equations listed below:**

Minimum Speed	S = $\sqrt{30Df}$ .....	<input type="checkbox"/>	<input type="checkbox"/>
Critical Speed	S = $3.86 \sqrt{R(f \pm e)}$ .....	<input type="checkbox"/>	<input type="checkbox"/>
Coefficient of Friction	f = $S^2/30D$ .....	<input type="checkbox"/>	<input type="checkbox"/>
	f = F/W .....	<input type="checkbox"/>	<input type="checkbox"/>
Distance	D = $S^2/30f$ .....	<input type="checkbox"/>	<input type="checkbox"/>
Time	t = $.249 \sqrt{D/f}$ .....	<input type="checkbox"/>	<input type="checkbox"/>
Combined Speed	SC = $\sqrt{S1^2 + S2^2}$ .....	<input type="checkbox"/>	<input type="checkbox"/>
Radius	R = $C^2/8M + M/2$ .....	<input type="checkbox"/>	<input type="checkbox"/>

**3. Are you familiar with:**

a. Chain of Events .....	<input type="checkbox"/>	<input type="checkbox"/>
b. Evidence from Trafficway .....	<input type="checkbox"/>	<input type="checkbox"/>
c. Evidence from Vehicle .....	<input type="checkbox"/>	<input type="checkbox"/>

**4. Prior crash investigation training (please list name of school and approximate dates):**

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**5. Education:**

	Year Graduated:
High School: _____	_____
College: _____	_____
_____	_____

*If any other comments or information relative to this application is required, please attach additional sheet.*

**Student's name (printed):** \_\_\_\_\_

**Signed:** \_\_\_\_\_ **Date:** \_\_\_\_\_

(student's signature)

# Institute of Police Technology and Management University of North Florida

## Registration Form

(Please type or print)

NAME \_\_\_\_\_ SS# \_\_\_\_\_

ORGANIZATION \_\_\_\_\_ TITLE \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

TELEPHONE \_\_\_\_\_ FAX \_\_\_\_\_

E-MAIL \_\_\_\_\_

Course Title: \_\_\_\_\_

Course Fee\*: \_\_\_\_\_

*\* Due to very limited seating, a \$250 non-refundable deposit is required in order to register for computer software or digital photography courses. Payment or purchase order must be submitted with registration.*

*For online courses, full payment must be received at least one week prior to the first day of class.*

*Please indicate the dates and location of the course for which you are registering:*

Course Dates: \_\_\_\_\_

Course Location: \_\_\_\_\_

**Please do not make  
airline reservations until you receive  
written notification confirming that the  
course will run as scheduled.**

**You can also register online at: [www.iptm.org](http://www.iptm.org)**

### Authorizing/Registering Official

*Americans with Disabilities Act Program Accessibility: Individuals who require reasonable accommodation in order to participate must notify the registrar at (904) 620-IPTM at least five working days prior to the class.*

NAME \_\_\_\_\_ TITLE \_\_\_\_\_

REGISTERING PERSON'S E-MAIL \_\_\_\_\_

PURCHASE ORDER NUMBER \_\_\_\_\_ [ ] FEE ENCLOSED

*Make checks payable to: Institute of Police Technology and Management*

[ ] SEND INVOICE TO \_\_\_\_\_

**REFUND POLICY:** Effective January 1, 2012, a 10% administrative fee will be assessed to all refunds. In lieu of a refund, student substitutions can be made or a credit can be issued for a future course.



#### Return to:

Institute of Police Technology and Management/University of North Florida  
12000 Alumni Drive • Jacksonville, Florida 32224-2678  
Phone: (904) 620-IPTM • Fax: (904) 620-2453 • website: [www.iptm.org](http://www.iptm.org)