THE INDIANA FORENSIC INSTITUTE

2010 COURSE CATALOG

July through December

Point of Contact:
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STUDENT CENTERED TRAINING

The Indiana Forensic Institute IFI has developed courses on the basis of surveys and end-of-course evaluations to meet law enforcement needs and to keep up with technology development. IFI courses are designed to train individuals based on published guidelines such as those from the FBI's Scientific Working Group on Imaging Technology (SWGIT). Instructors are chosen for their ability to instruct as well as their experience in law enforcement and their specific disciplines.

COURSE CREDIT

All IFI courses carry Continuing Education Units (CEU's) and Training Hour credits, certified by the Indiana Law Enforcement Training Board and application is in progress for CLE credits for several of the courses that will be of interest to attorneys. Students receive hands-on training using the Institute's top-of-the-line equipment and software, as well as using their own equipment in many IFI courses. Specially designed courses can be offered at your location or agency.

REGISTRATION INFORMATION

Enrollment:
Space is limited. Registration deadline is 7 days prior to the start of each class and enrollment is guaranteed when you have registered. If space is not available you will be notified. To receive early registration fees, forms must be received 30 days prior to the start of the class.

Change or Cancellation of Classes:
If we must cancel or postpone a class, you will be notified. Please provide telephone numbers and/or emails so we can contact you.

Refunds:
All class fees will be refunded if you notify us at least 4 business days prior to the first class meeting. Contact us at (317) 842-6075 x101 or (800) 783-9653. You may leave a message 24 hours a day. For cancellations with less than 4 business days advance notice there will be a $25 cancellation fee.

Ways to Register/Pay Enrollment Fees:
Registration is done through the website http://2010ifitc.theregistrationsystem.com. All course fees are preferred, but not required, prior to start of class. An invoice can be sent to your department and/or a department PO can be used.

•**By Mail:** Make your check or money order payable to The Institute for Forensic Imaging and mail to: The Indiana Forensic Institute
9855 Crosspoint Blvd, Suite 126
Indianapolis, IN 46256

•**By Purchase Order:** Include your departmental purchase order number or request billing on your departmental letterhead with an authorizing signature with the specific amount and mail or fax to IFI.

•**On-Line:** Credit cards will be accepted on the registration website:
http://2010ifitc.theregistrationsystem.com

Location:
Courses will be held at the Indiana Forensic Institute, located at 9855 Crosspoint Blvd, Suite 126, Indianapolis, IN 46256. (Google Map)

Hotel Accommodations:
If you need hotel recommendations, please call (317) 842-6075 x101 or (800) 783-9653. Also available on our website at www.ifi-indy.org.

Equipment:
Students are encouraged to bring personal or departmental equipment to use in conjunction with IFI's equipment in order to fulfill IFI's goal of providing students with training useable on the job with already owned equipment. IFI has some limited loaner equipment that can be used if the student cannot provide.

IFI COURSE LISTING FOR FALL 2010

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Testimony and Legal Matters

July 8-9, 2010

Sonia Leerkamp and Amy Leitch

This course, by lecture and discussion, provides an overview of the rules and responsibilities of proffering testimony in depositions, trials and other legal forums. Presenters of testimony should know both the requirements of the law and the typical strategies lawyers might use as they prepare for trial.

TOPICS INCLUDE:

- ► Who is an "expert"?
- ► Direct and indirect testimony
- ► Admissibility vs. Weight
- ► What to expect in various forums
- ► Laws regarding testimony
- ► Biography and credentials
- ► Typical opposing counsel actions
- ► What can an expert say that a lay witness cannot
- ► Impartiality and the appearance there of
- ► Types of legal forums: deposition, trial, hearing, etc.
- ► What to reveal at each type of forum
- ► Laws regarding displays and physical items
- ► Literature citation
- ► Practice in key areas of providing testimony

Both instructors are experienced prosecutors.

Credit: 16 hours

Cost: $260

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How to Testify at Depositions and Trials

July 14-15, 2010

Herbert Blitzer, Instructor
Jim Sobek, Guest Lecturer

This course, by lecture and discussion and practice, provides an overview of what the "expert" witness should provide in legal forums. Attention will be given to the most effective ways to present technical material to a lay audience. If students have a recent case that they can bring, they should. If not, sample cases will be provided. These will be presented and their strengths and weaknesses reviewed.

TOPICS INCLUDE:

- ► How to teach a lay audience
- ► Emotional and rational responses
- ► "Practice makes perfect"
- ► The Goldilocks solution
- ► Plaintiff or Prosecutor positions
- ► Demonstrations, facsimiles and real items
- ► Engaging the audience
- ► Making sure your technology is working
- ► Who else participated in preparation of materials
- ► Presenting credentials

Mr. Blitzer is a published author in the field of forensic science and Mr. Sobek has years of experience giving testimony.

Credit: 16 hours

Cost: $260

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Forensic Digital Imaging, Phase III

July 19-23, 2010

Rudy Gruenke

This course, by conference, demonstration and practical "hands-on" training is designed for people who have training and experience in capturing and processing digital images, but need to assure that they are fully prepared to testify to images. In keeping with the recent report on forensics from the National Academy of Science, which indicates that experts should be generally knowledgeable in the scientific grounds for the tools and techniques that they employ, key aspects of the science behind the functions and equipment will be discussed. Students will be able to explain processes to a jury and to answer questions on why certain tools were used and how they work. In addition in a recent trial, the SWGIT guidelines for image processing were to be introduced into the proceedings. This means that experts submitting images that they have processed should be fully prepared to testify that they followed those guidelines or have a strong argument as to why they used an alternative process. The appropriate SWGIT guidelines will be reviewed.

TOPICS INCLUDE:

► Measurements and scales used in photography
► Color sensitivity and factors controlling camera or scanner response
► Basic filters and how they work
► Interpolation tools and how they work
► SWGIT guidelines for key imaging steps
► Lenses, lens formulas, and how to set up special assignments
► Factors controlling resolution and how to set up to achieve a target resolution
► Calculations the camera makes or you make when processing an image in raw format

PREREQUISITE: Forensic Digital Imaging, Phase I & II or equivalent experience. The textbook, Understanding Forensic Digital Imaging, by Blitzer, Stein-Ferguson and Huang is included.

Credit: 40 hours
Cost: $650

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Forensic Digital Imaging, Phase I

July 26-29, 2010

Rudy Gruenke

This course, by conference, demonstration and practical "hands-on" training, teaches the basics of Adobe Photoshop, the use of digital cameras, scanners, computers and digital imaging methods to produce quality images for law enforcement professionals. The selection and use of equipment for efficient imaging as well as the handling of digital images in accordance with established SWGIT guidelines will be stressed.

TOPICS INCLUDE:

- ► System Diagnostics
- ► Image enhancement methods
- ► Digital cameras
- ► Archiving images
- ► Special filters for enhancing images
- ► Standard Operating Procedures
- ► Adobe Photoshop
- ► History logs
- ► Downloading images
- ► Film and flatbed scanners
- ► Digital darkrooms
- ► Digital Printers

RECOMMENDED EQUIPMENT: Digital camera kit (but not required).

PREREQUISITE: A basic understanding of photography and computers.

The course fee includes a copy of Forensic Digital Imaging and Photography, a textbook by Blitzer & Jacobia and published by Elsevier/Academic Press.

Mr. Gruenke has decades of experience in forensic imaging as part of a major police agency.

Credit: 32 hours
Cost: $520

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Investigation of Explosion Incidents

August 2-3, 2010

John Goodpaster

This course, by lecture, conference, and demonstration teaches how to investigate scenes where explosions have occurred. Attention is given to typical indicators of causes and sources of explosions, problems recording the scene and collecting materials for laboratory analysis.

TOPICS INCLUDE:

- ► Preliminary scene assessment
- ► What materials to collect for the lab
- ► How to prepare presentations
- ► Photodocumentation
- ► Measuring the scene

Mr. Goodpaster is an expert in analyses of explosions and the materials collected from scenes.

Credit: 16 hours
Cost: $260

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Calibration and Validation of Laboratory Equipment

August 4-5, 2010

Mihran Tuceryan

Using lectures and demonstration, the fundamentals of calibration of several laboratory devices will be reviewed and the means for validating processes will be described. The courts are becoming more and more concerned with these matters, and lawyers are quick to bring in opposing experts if there is any indication that there has been laxity in these regards.

TOPICS INCLUDE:

- ► What is validation
- ► Basics of calibration
- ► Measurement of outputs
- ► Chemical analytical devices
- ► Mechanical devices
- ► What is reliability
- ► Calibration using standard samples
- ► What is the probability of a correct opinion
- ► Optical devices
- ► Keeping records and control charts

Mr. Tuceryan has more than a decade of experience, both in academia and the corporate environment. He will involve guest lecturers to cover different aspects of the general topic.

Credit: 16 hours
Cost: $260

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Digital Imaging for Managers

August 9-10, 2010

Rudy Gruenke

This course, by conference, demonstration and practical "hands-on" training, teaches individuals how to set up an image workflow for managing digital files and write the standard operating procedure necessary when working with digital images. Managing the digital workflow and files created through the use of digital cameras has become a tremendous task. Ensuring they are not compromised is an absolute necessity. As with many other law enforcement operations, the way to achieve benefits without undue exposure to law related questions is through the development and implementation of effective SOP's. This segment will review all areas of concern, describe the process for developing SOP's and provide references for agencies interested in developing SOP's.

TOPICS INCLUDE:

- ► Establishing a workflow
- ► Equipment requirements
- ► Expected costs
- ► Expected savings
- ► Training requirements
- ► Protecting images
- ► Archive images
- ► Types of images
- ► Legal challenges
- ► Constructing an SOP
- ► Scientific Working Group on Imaging Technology (SWGIT) standards.

Credit: 16 hours
Cost: $260

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Preparing Images for Courtroom Presentation

August 11-12, 2010

Tim Maher

This course, by conference, demonstration and practical "hands-on" training teaches how to prepare exhibits using both hard copies and an electronic presentation. What to include in the presentation and how best to present it will be included. The course covers the expert witness presenting their visuals in court and from the prosecutor's point-of-view, such as opening and closing arguments. A slide presentation program is taught which can be used for an electronic presentation in court and for preparing hard-copy visuals.

TOPICS INCLUDE:

- ► Presentation Software
- ► What to include in the presentation
- ► How to prepare hard-copy presentations
- ► Creating and presenting a courtroom presentation
- ► Presentation Techniques
- ► How to present presentations
- ► How to prepare an electronic presentation

PREREQUISITE: A good working knowledge of computers.

Mr. Maher has extensive experience in the preparation of materials for presentation in legal forums.

Credit: 16 hours
Cost: $260

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Investigation of Fire Incidents, Phase I

August 30-31, 2010

Jay Dold

This course, by lecture, conference, and demonstration teaches the basics of how to investigate a scene where a fire has occurred. Attention is given to typical indicators of causes and sources of fire, problems recording the scene and collecting materials for laboratory analysis. This course is intended for people relatively new to the field.

TOPICS INCLUDE:

- ► Preliminary scene assessment
- ► What materials to collect for the lab
- ► How to prepare presentations
- ► Photodocumentation
- ► Measuring the scene
- ► SWGIT guidelines

Mr. Dold has a long experience as a fire investigator, both for a major agency and as an independent practitioner.

Credit: 16 hours
Cost: $260

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Investigation of Fire Incidents, Phase II

September 1-2, 2010

Jay Dold

This course, by lecture, conference, and demonstration teaches more advanced methods of how to investigate a scene where a fire has occurred. Attention is given to typical indicators of causes and sources of fire, analysis of samples and problems recording the scene and collecting materials for laboratory analysis. It is intended for people with some experience in the field. Investigation of Fire Incidents, Phase I or equivalent experience is a prerequisite.

TOPICS INCLUDE:

- ► Preliminary scene assessment
- ► What materials to collect for the lab
- ► How to prepare presentations
- ► Photodocumentation
- ► Measuring the scene

Mr. Dold has extensive experience as a fire investigator, both for a major agency and as an independent practitioner.

Credit: 16 hours
Cost: $260

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Crime Scene Digital Photography *(Still and Video)*

September 13-17, 2010

Rudy Gruenke

This course teaches law enforcement officers how to document a crime scene with high-quality photographs and video. Students will learn the basics of photography and use digital and video cameras to document mock crime scenes. Lectures, discussions, and practical exercises help students put specific techniques into practice.

Topics Include:

- ► Basic Photography
- ► Lenses/Filters
- ► Flash Photography
- ► Close-up Photography
- ► Digital Photography
- ► Video Cameras
- ► Crime Scene Photography
- ► Protocols for documenting crime scenes
- ► Camera Controls
- ► Exposure Controls
- ► .Lighting Techniques
- ► Intro to digital imaging
- ► Downloading Images
- ► Video Camera Controls
- ► Crime Scene Videography
- ► SWGIT guidelines

RECOMMENDED EQUIPMENT: Digital and Video cameras, tripod, macro lens, cable release, 3-foot extension cable for flash and spare batteries. A limited number of loaner still and video cameras are available.

PREREQUISITE: A basic understanding of photography is useful.

Credit: 40 hours
Cost: $650

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Introduction to Radiation for Emergency Personnel

September 20-21, 2010

Richard Whitman

This course, by lecture and practical demonstration, provides an orientation and awareness of the different kinds of radiation that Police Officers, Firefighters and Forensics Personnel may see during accidents or incidents. The class focus will be on how each modality is commonly used and how each is used in forensics work. Special emphasis will be made on gathering evidence, the unique hazards of each and protection techniques for First Responders and/or Forensic Personnel.

TOPICS INCLUDE:

- ► Introduction to Radiation
- ► Radioactive Materials: Characteristics of radioisotopes
- ► Medical uses of radioisotopes
- ► Industrial uses of radioisotopes
- ► Authorities involved in radiation control in the United States
- ► Contamination events, e.g., a medical incident or a Improvised Nuclear Device
- ► X-rays for Medical
- ► X-rays for security applications
- ► Lasers, uses and characteristics
- ► Radiofrequency, i.e., Microwave, UHF, VHF
- ► Legalities and Radiation
- ► Radiation Incident Scenario (Tabletop Exercise)
- ► Trends in Security Radiation Use
- ► Radiation Measurements

Mr. Whitman has decades of experience in the field of radiation as applied to public safety.

Credit: 16 hours

Cost: $260

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Introduction to Analysis of Patterns in Evidence

September 23-24, 2010

John Vanderkolk

This course, by lecture, conference, and demonstration, teaches the basics of analysis of patterned evidence. Examples include: fingerprints, shoe impressions, tire tracks, nose prints, blood spatter, and tool marks. Attention is paid to the ACE-V method to support unbiased analysis. The selection and use of equipment for efficient imaging as well as the handling of digital images in accordance with established standards will be stressed.

TOPICS INCLUDE:

- ► ACE-V methodology
- ► Image enhancement methods
- ► Digital cameras
- ► Enhancements vs Manipulations
- ► Special filters for enhancing images
- ► References
- ► Typical marks of interest in various fields
- ► Keeping history and operational notes
- ► Archiving images
- ► Film and flatbed scanners
- ► Standard Operating Procedures

Mr. Vanderkolk has decades of experience in forensic pattern analysis as part of a major police agency.

Credit: 16 hours
Cost: $260

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Basic Video Capture, Enhancement and Analysis

September 27-30, 2010

Rudy Gruenke

This course, by conference, demonstration and practical "hands-on" training, teaches students how to capture, enhance and analyze both analog and digital video through the use of a video imaging workstation. CrimeVision, Adobe Premiere, Adobe PhotoShop software and special video tools developed by the institute are used to edit and extract data from both the still and video digital images for analysis. Use and selection of equipment for efficient video capture, enhancement and analysis are covered in detail.

TOPICS INCLUDE:

- ► Introduction to Video
- ► Adobe Premiere software
- ► Video Capture Workstation
- ► Video Acquisition (analog & digital)
- ► Video Restoration
- ► Field Alignment
- ► Video Stabilization
- ► CrimeVision software
- ► Adobe PhotoShop software
- ► Demultiplexing
- ► De-Quad
- ► Frame Averaging
- ► Rescale
- ► Archiving

PREREQUISITE: Completion of Forensic Digital Imaging, Phase I is recommended or equivalent experience.

Mr. Gruenke has more than a decade of experience in forensic imaging as part of a major police agency.

Credit: 32 hours
Cost: $520

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Working With an Expert

October 4-5, 2010

Sonia Leerkamp

This course, by lecture, demonstration and practical exercises, provides an orientation and awareness of the different kinds of issues a lawyer must address to develop a successful expert witness. Also what the expert should expect and ask for as the relationship develops. There will be examples of demonstrative evidence, discussion of how it should be used, and the probable reactions from opposing counsel. There is also the issue of the opposing counsel's expert, and how that individual should be cross examined.

TOPICS INCLUDE:

- ► How to find suitable experts
- ► Sharing the theory of the case
- ► Finder of fact expectations
- ► How to prepare defense for hearings
- ► Choosing the right one
- ► Review of the available evidence
- ► How to prepare offense for hearings
- ► What, exactly, should the testimony cover

Ms. Leerkamp is a four-term prosecutor in Hamilton County, Indiana.

Credit: 16 hours

Cost: $260

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Demonstrative Evidence

October 6-7, 2010

Timothy Maher

This course, by lecture and example, provides an orientation and awareness of the different kinds of demonstrative evidence in common use. How evidence should be prepared and presented is also covered. Examples will include video, simulations, photographs, and 3-D representations. As with any expert preparing this kind of material, the lawyer must make clear what is expected relative to the trial story line.

TOPICS INCLUDE:

- ► How to find a suitable preparer
- ► Who will actually testify
- ► Finder of fact expectations
- ► How to prepare the defense for hearings
- ► Fair and Accurate Representations
- ► What modality/technology should be used
- ► The preparer must be available to testify if called
- ► How to prepare offense for hearings
- ► What, exactly, should the exhibits cover
- ► Background exhibits

The course will include the textbook, Demonstrative Evidence for Complex Litigation, by Timothy Maher, Lawyers and Judges Publishing Co.

Mr. Maher has created demonstrative evidence for many trials.

Credit: 16 hours

Cost: $260

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Major Accident Scene Investigation

October 11-12, 2010

Kevin Johnson

This course teaches law enforcement officers how to document a major accident scene with high-quality photographs and video. Students will learn the basics of photography and use digital and video cameras to document mock accident scenes. Lectures, discussions, and practical exercises help students put specific techniques into practice. Attention will be given to, what should be collected, how to protect the gathered materials, what notes to take and photographs that should be taken.

Topics Include:

- ► Basic Photography
- ► Lenses/Filters
- ► Flash Photography
- ► Close-up Photography
- ► Digital Photography
- ► Video Cameras
- ► Protocols for documenting accident scenes
- ► Camera Controls
- ► Exposure Controls
- ► Lighting Techniques
- ► Intro to digital imaging
- ► Downloading Images
- ► Video Camera Controls
- ► Applicable SWGIT guidelines

RECOMMENDED EQUIPMENT: Digital and Video cameras, tripod, cable release, 3-foot extension cable for flash and spare batteries. A limited number of loaner still and video cameras are available.

PREREQUISITE: A basic understanding of photography is useful.

Credit: 16 hours
Cost: $260

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Forensic Digital Imaging, Phase II

October 25-28, 2010

Rudy Gruenke

This course, by conference, demonstration and practical, "hands-on" training teaches advanced tools in Adobe PhotoShop to produce quality images for law enforcement professionals. Phase II, demonstrates and teaches Adobe PhotoShop in much greater depth than Phase I, therefore a working knowledge of PhotoShop is required. Since image processing is the most common area for contesting images in courtrooms, the SWGIT guidelines will be reviewed and followed.

TOPICS INCLUDE:

- ► Image control and adjustments
- ► ICC Profiles
- ► Special plug-in filters
- ► Advanced photographic techniques
- ► Working with Raw Images
- ► Verifying Primary Images
- ► Color Management
- ► Layers, masks, and channels
- ► Alternative lighting
- ► Expanding Dynamic Range
- ► Hashing images
- ► Construct 1:1 Composites

RECOMMENDED EQUIPMENT: Digital camera kit (but not required).

PREREQUISITE: Applicants should have completed Forensic Digital Imaging Phase I or have equivalent experience using Adobe Photoshop, digital cameras and scanners.

Mr. Gruenke has extensive experience in forensic imaging as part of a major police agency.

Credit: 32 hours
Cost: $520

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ADDITIONAL INFORMATION

IFI is also available for other law enforcement needs:

Consulting and Research: The IFI staff will share their knowledge of equipment, software, and procedures to ensure the highest quality results based upon the needs of the department or agency requesting such information. In particular, IFI has done research for the Indiana Criminal Justice Institute, the National Institute of Justice, and the National Institute of Standards and Technology. IFI can provide referrals for case investigation and analysis work as well.

Constructing Computer Systems: IFI has constructed, tested and installed digital imaging darkrooms throughout Indiana to include Carmel Police Department, Greenwood Police Department, Anderson Police Department, and State Police labs in Lowell, Fort Wayne, Post 52 and the Indianapolis-Marion County Forensic Services Agency. The IFI staff is available to construct a system designed for your specific needs with continued support available after installation. The training of system operators is included in the contract.

IFI OFFERS ON-SITE TRAINING

IFI courses were developed on the basis of surveys of practical industry needs, technology evolution, and consistency with industry norms. Instructors follow approved course outlines to assure that all students are taught the full range of topics selected for the particular course. Compliance with the guidelines of the Scientific Working Group on Imaging Technology (SWGIT is sponsored by the FBI) is stressed. IFI can conduct courses at your site for better convenience. These courses include:

Forensic Digital Imaging, Phase I
Forensic Digital Imaging, Phase II
Forensic Digital Imaging, Phase III
Crime Scene Digital Photography
Digital Images for Managers
Presentations for the Courtroom

Some of the courses require the requesting agency to furnish a computer lab. If necessary, these courses can be tailored to meet specific needs of the requesting department or agency. Specialized training is also available for those agencies transitioning to digital to ensure that all personnel are familiar with the equipment and the new procedures that will be used with digital images.

ON-SITE COURSE FEES

Course Length Registration Fee

2-days $300.00 per enrollee
3-days $450.00 per enrollee
4-days $600.00 per enrollee
5-days $750.00 per enrollee

On-Site courses: Minimum of 10 Students—Maximum of 20. Courses can be constructed/modified/combined to meet agency needs. Requesting agency must furnish classroom, equipment, software, etc, depending on the course requested. IFI will furnish all training materials and any special equipment needed for the course.

On-Site Cost: 10 students x registration fee + expenses (minimum).
Any students enrolled over 10 will be charged one-half of the registration fee.

Expenses: Travel, Per Diem are at the Federal travel rate and Lodging is at cost for the area.
Discounts are available for multiple courses scheduled at different times in the same calendar year.