

Photography for Accident Reconstruction, Product Liability, and Testing

Seminar Outline

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Day One

- 1- Introduction: It's All About the Light
 - a- Light: Quantity, Quality, Direction
 - b- Fundamentals make the difference

- 2- Exposure (aperture, shutter speed, ISO)
 - a- Aperture: depth of field (DOF); backgrounds/foregrounds
 - b- Shutter speed: freeze or blur moving subjects; eliminate camera shake
 - c- ISO: reduce noise while keeping reasonable shutter speed
 - d- Digital noise
 - e- Reciprocity: how they all interact
 - f- Histograms: using in-camera
 - g- Highlight warnings
 - h- Exposure modes: Manual, Aperture Priority, Shutter Priority, Program, Auto

- 3- Camera Menu Settings (how and why to set)

- 4- Camera Fundamentals - Part One
 - a- DSLR vs. mirrorless
 - b- Formatting memory cards
 - c- Eyepiece and shutter button
 - d- Camera LCD displays
 - e- Manual focus vs. autofocus
 - f- Using Live View for focus and composition
 - g- Vibration Reduction/Image Stabilization
 - h- Camera resolution and file formats
 - i- Raw vs. JPEG
 - j- Color temperature and white balance

Day Two

- 4- Camera Fundamentals - Part Two
 - j- Sensor sizes (full frame vs. crop sensor vs. compact cameras)
 - 1- Normal lens for full frame vs. crop sensor
 - k- Lens choice factors
 - 1- focal length and angle of view
 - 2- focal length vs. camera position

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Day Two - Continued

- m- Perspective (most misunderstood and most important)
- n- Depth of Field (aperture and focus point)

- 5- Gear (what works and why)
 - a- Remote releases
 - b- Tripods (best way to improve your photography)
 - c- Tripod heads
 - d- Filters
 - 1- UV (clear protection)
 - 2- Polarizer (vitaly important)
 - 3- Neutral density
 - e- Useful accessories

- 6- Flash (an essential tool)
 - a- Exposing for flash and ambient light
 - b- Manual vs. TTL
 - c- Fill flash vs. full flash
 - d- Tilting and rotating flash head
 - e- Flash duration and recycling
 - f- Reflectors
 - g- On vs. off-camera flash
 - h- Multiple flashes
 - i- Studio lighting setups (indoors, outdoors, on-site)

- 7- Close-up and Macro Photography
 - a- Reproduction ratio vs. magnification
 - b- Macro flashes
 - c- Macro and other specialty lenses
 - d- Macro accessories and supports
 - e- Securing loose pieces
 - f- Using scales

- 8- Night Photography
 - a- Show details or accurately render?
 - b- Gear needed: tripod, flash, flashlight
 - c- Noise reduction in-camera and in post-production
 - d- Light painting with flash and with flashlight
 - e- Raw vs. JPEG
 - f- Capturing ambient light
 - g- Monitor calibration and camera settings

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Day Three

-9- Techniques, Applications, and Workflow

- a- Depth of Field and Focus
- b- Polarizer uses
- c- Fill flash
- d- Proper use of scales
- e- Composition and details
- f- Unrelated vehicles and people in photos
- g- Documenting vehicle damage
- h- Test facilities and testing: vehicle testing, chem lab, product liability, facility documentation

-10- Post-Processing

- a- Post-processing workflow
- b- PDFs are *not* photographs
- c- File naming
- d- Metadata: IPTC and Exif
- e- Monitor calibration
- f- Raw workflow
- g- Color space
- h- Creating a Master File
- i- Image and printer resolutions
- j- Adjusting received and made photographs
- k- Creating panoramic images
- l- Focus stacking
- m- Using stack median to eliminate traffic or people
- n- Photo manipulation good and bad