Best Practice in Accident Photography

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November 2024

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Accident Photography

Content

Accident Photography

Who am I and where do I come from?

Cranfield University

- Postgraduate University
- Research & Industry orientated
- MSc in Safety and Accident Investigation

Cranfield Forensic Institute

- Forensic MSc Programme
- FAA, FBio & FI as well as Digital Forensics

Accident Photography
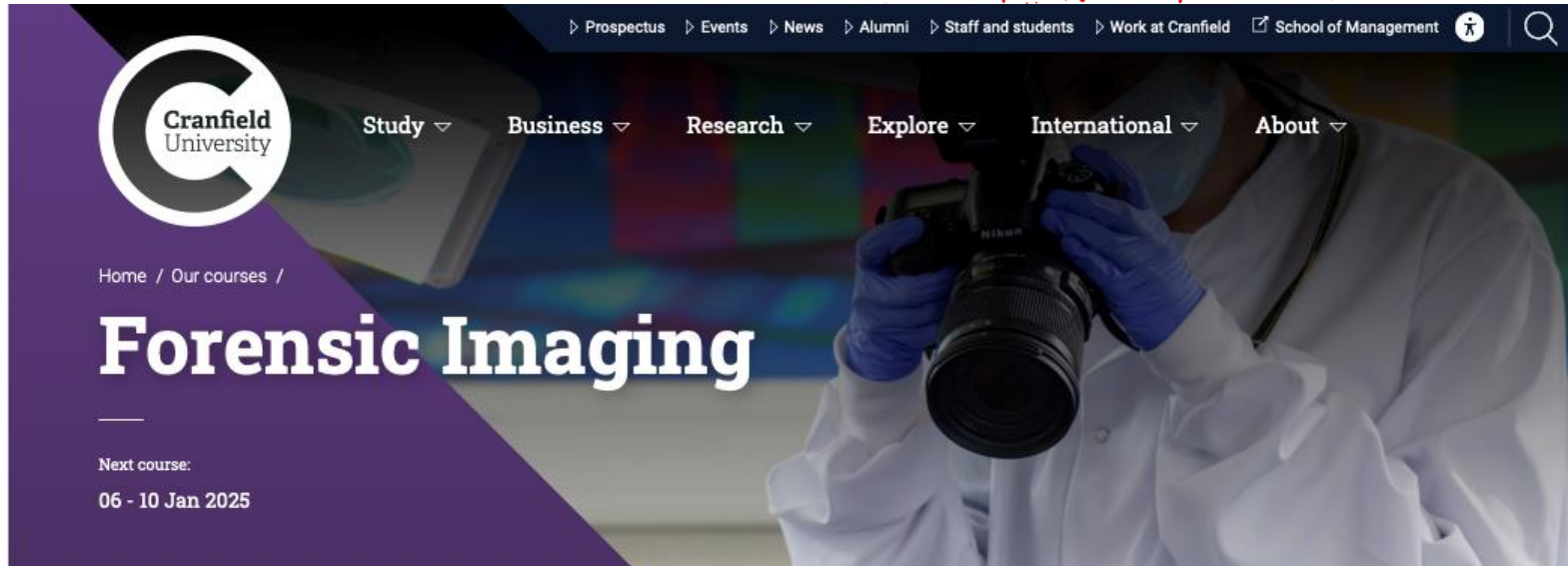
Who am I and where do I come from?

Main teaching focus (apart from forensic archaeology)
- Forensic Imaging
- Forensic Imaging (FIM) module (5-day, Mon-Fri)
- Can be done as CPD short course

Accident Photography

(very) Basic Principles

Exposure

- A combination of shutter speed & aperture
- 'Auto' setting will open up aperture = low DoF!

Depth of Field

- The zone that is in focus

Max DoF → Small aperture → Long exposure → Tripod

Accident Photography

Overview

Light

Contrast (too much or too little)

Time pressure

Accident Photography

Light

Sunlight

1. Very bright (also covered in 'Contrast')
2. Changing conditions
3. Lack of light

Solution

1. Remove light (i.e. add shade) or add light
2. Remove light (i.e. add shade) or add light; keep an eye on WB
3. Artificial light needed

Accident Photography

Light

Artificial Light

1. Flash or 'video' lights
2. You usually need more than you think
3. How long are the batteries going to last?

Solution

1. Flash less predictable; may need more attempts
   Video lights drain quicker and are less bright
2. If you can, have extra light and tripods to illuminate scenes
3. Extra, charged batteries; means to charge on site
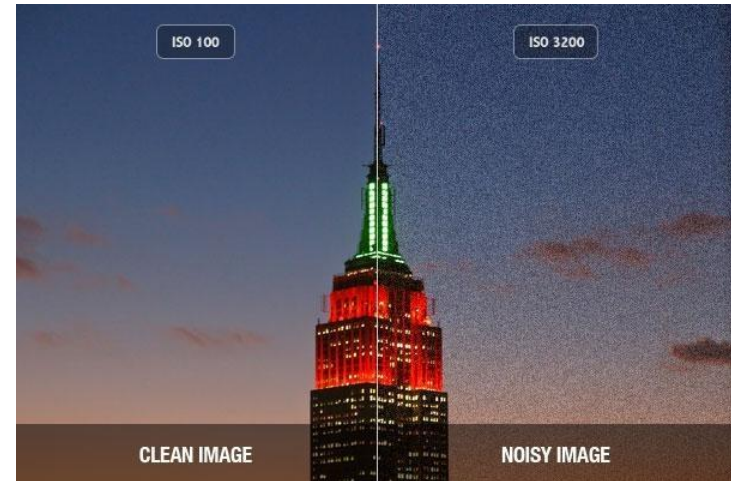
Accident Photography

Light

ISO

- Used to be of limited use

Solution

- Create a low light scene
- Take image at ISO 100 & long exposure on tripod
- Take same image at midrange ISO & maximum ISO
- Compare images

ISO 100   ISO 25600

Accident Photography

Contrast

Too much
1. Very bright sunlight (midday)
2. (direct) Flash light
3. 'Losing' items in images
4. White boards/evidence numbers

Solution
1. Try to create shade or add even more light
2. Direct and/or indirect diffuse
3. Double-check you can see the evidence
4. Use *grey* boards and/or boards/evidence numbers of appropriate size

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Contrast

Too little

- Burn scenes ... everything is black (or grey)

Solution

- Really tricky
- Stage scenes (black/dark grey materials) and play with lighting until you start getting a feel for what works

Accident Photography

Time pressure

Settings

- Test various settings (ISO, WB, Metering, etc.)
- Programme best settings for various scenarios
- (if possible) multiple cameras with different settings

Tick lists

- Takes time to complete but save time by eliminating need to reshoot
- Ensures all types of images are taken

Accident Photography

What can help you on site?

Mirrorless
- So much lighter; same capabilities

Lights
- Different types/sizes

Tripods
- Different types/sizes

Camera Grips
- Allow different orientation
- Can give you twice the battery life

Power banks
- Allow battery charging while on site

Accident Photography

Overview

What is it and how can it help?
- Creating 3D models from 2D photographs
- Overlapping images from various angles allow software to process a 3D model

What camera can I use?
- Any camera (more or less)
- Still or video

Software/Hardware
- Metashape or Pix4D; tons of RAM and good graphic card(s)

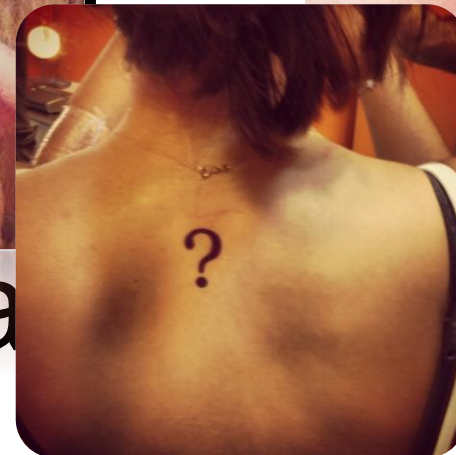### Apps
- Fun but not (yet) for professional jobs

Content

Questions