

RS&A Online Training

Essential Camera Operations and Controls

Instructor: Scott Campbell
16 Hours | \$350.00 | 30 Day Access



TO REGISTER VISIT US ONLINE AT: WWW.RONSMITHANDASSOCIATES.COM

- When you use a digital camera, do you leave it on “automatic” and just accept the image that the camera gives you?
- When you have used the camera on “automatic”, have you been disappointed in some of the resulting images?
- Do you ever wonder what all the buttons, dials and controls do?
- Have you tried reading the several hundred-page owner’s manual and just put it aside due to confusion?
- Would you like to learn to use the camera properly and utilize those buttons and dials to improve your images?
- In general, would you just like to take better photographs?

If you answered yes to one or more of these questions, this course will help you.

THE PURPOSE AND TARGET AUDIENCE

This “essential” online course is designed for anyone who wants to learn more about the operations and controls of a digital camera. You will learn what the various controls do, and more importantly, why you use them, or one versus another.

Even though we will cover the “essentials”, you will be learning some complicated subject areas so even those who have used cameras for some time will benefit in getting a better understanding of things like:

- Proper camera set up procedures
- Exposure compensation
- Depth of field issues
- Lens distortion
- The exposure triangle and use of reciprocity

THE NEED

Most people that use a camera just leave it in the “Automatic” mode and let the camera do the work. And honestly, that works a lot of the time. However, anyone who has done this will tell you that some of those images were not very good. Some were too bright, too dark or blurry.

If you wanted to fix these problems, you should use the camera’s various features and controls manually. If you are not taught properly, and in an understandable way what those controls do, you press buttons and hope to fix the problem. Guessing your way to a solution is not the way to fix things.

With this course, you will learn how to control the brightness and clarity of your images. There are several ways to fix these problems and you will learn which are your best options for various lighting conditions.

DURING THIS ONLINE COURSE

During this course you will learn about some complicated topics, but I like to break them down to easier to understand examples as shown here:

INTRO – WHAT CAN BE WRONG WITH A PHOTOGRAPH?

- I like to use analogies when I teach so the average person can understand sometimes difficult concepts.
- I may as an example, talk about the brightness of a common incandescent light bulb.
 - If you can understand that a 100-watt light bulb is brighter than a 75-watt or 60-watt bulb, you can understand exposure (brightness) with a camera.



100-watt



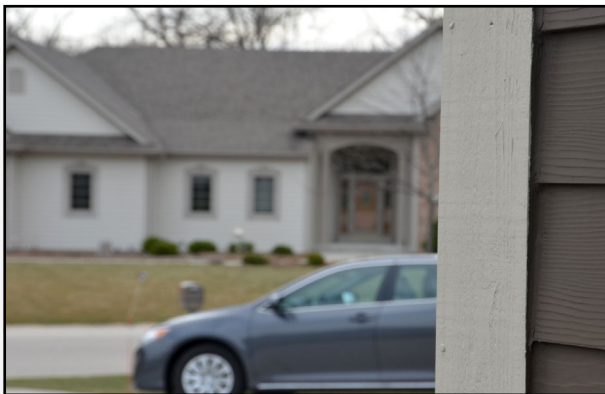
75-watt

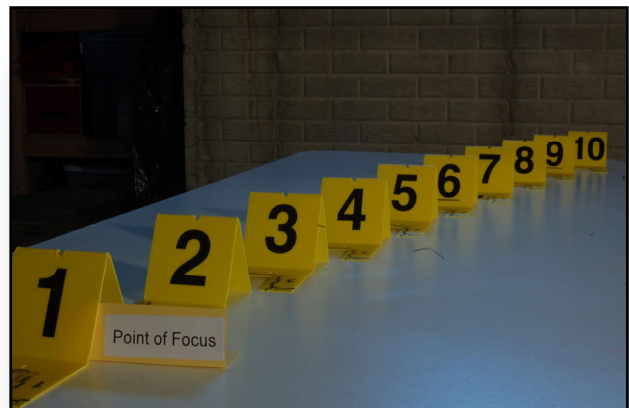
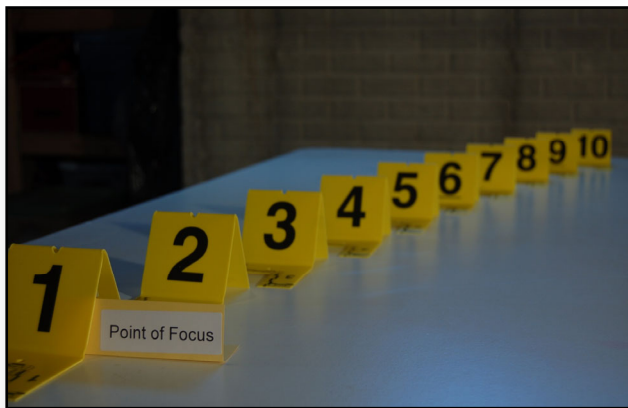
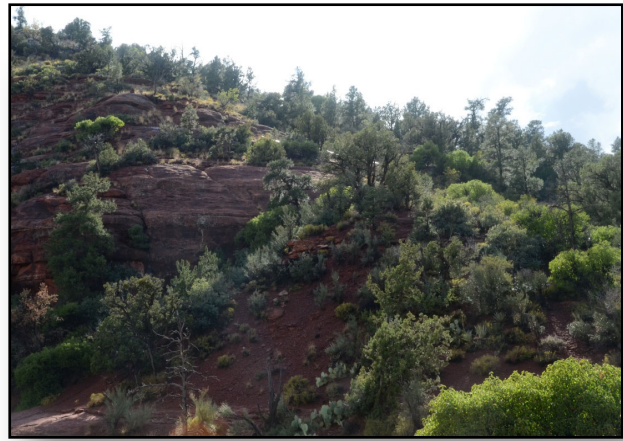


60-watt



You will also see and examine a lot of different images. Here are course examples of some poor quality (before) images and better quality (after) images. You will learn the techniques during this course to easily identify and then fix these common problems.





Upon completion of this course, students should have a thorough understanding of how cameras function, how to make adjustments for various lighting conditions and capture properly exposed and clear images.

YOUR INSTRUCTOR

Scott Campbell

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Scott Campbell is a 28-year veteran of the City of Milwaukee, Wisconsin Police Department, retiring as an Identification Supervisor and Shift Commander for their Identification Division in 2006. Scott started his career in uniform patrol and then was assigned to a variety of specialized units including the Tactical Enforcement Unit, or S.W.A.T., where he was utilized as one of the lead instructors.



In 1994 Scott transferred to the Identification Division where he began his crime scene, evidence photography and fingerprint identification career as an Identification Technician. In 2001 he was promoted to Supervisor and was appointed the Division's Training Coordinator where he developed instructional programs and trained new technicians, recruit officers, detectives and supervisors for the department. In addition to his work related practical experience, Scott has received more than 800 hours of training in the fields of forensic identification, crime scene processing and management, evidence photography, and instructor development.

With more than 25 years of experience as a crime scene technician, fingerprint identification specialist and instructor, Scott has provided approximately 300 specialized training courses and lectures in over 35 different states. He has provided training for Ron Smith and Associates; State of Wisconsin Technical Colleges; North East Multi-Regional Training (Illinois); and The University of Arkansas – Criminal Justice Institute. He is a Life Active member of the International Association for Identification and member the Wisconsin Association for Identification. Scott has an Associate Degree in Police Science and has been certified by the International Association for Identification as a Senior Crime Scene Analyst. He has served as a member of the IAI's Forensic Photography and Electronic Imaging Science and Practice Sub-Committee.

APPROVED BY THE INTERNATIONAL ASSOCIATION FOR IDENTIFICATION

This RS&A online course has been approved by The International Association for Identification for 16 Hours of continuing education credits for Certification and Re-Certification.

**International Association
for Identification**

COURSE OUTLINE

1. Course Introduction

- a. What is this course about and what you can expect?
- b. What can be wrong with a photograph
- c. Selecting the proper tool for the job
- d. Can't I just use the Automatic setting?
- e. What can go wrong

2. Camera Controls – Part 1

- a. Memory card slot
- b. Shutter release
- c. General exterior body controls rear
- d. Monitor brightness
- e. Quick buttons “i” and “Q”
- f. Live View
- g. General exterior body controls front

3. Camera Controls – Part 2

- a. Hot shoe & self-timer
- b. Mirror function
- c. Shooting modes
- d. Point & shoot camera controls
- e. Shutter
- f. Image sensor size

Exercise 1 – Lens Installation

4. Lens

- a. Lens Flare
- b. Functions and focal length
- c. Angle of view
- d. Lens distortion (perspective)
- e. Lens designations and controls
- f. Vibration reduction
- g. Focus auto versus manual
- h. Diopter

Exercise 2 – Diopter Adjustment

5. Memory cards

- a. Types of cards
- b. Capacity

6. Image quality and size

- a. Resolution (megapixels)
- b. Raw versus JPEG
- c. Image quality and size
- d. Image counters

Exercise 3 – Image Quality and Size

7. Cell phone versus camera quality

8. Exposure Compensation

- a. What is exposure compensation
- b. Exposure indicator and increments
- c. Full stops and third stops
- d. Double versus half brightness
- e. How does the camera do this
- f. How to make the exposure changes

Set Up for Exercises

Exercise 4 – Exposure Compensation

9. Camera set up suggestions

- a. ISO Automatic
- b. Timers and sleep modes

10. Shutter Speed

- a. What is it and what does it do?
- b. Flash synchronization speed
- c. How does it affect exposure and motion blur?
- d. Shutter speed designations

Exercise 5 – Shutter Speed

11. Aperture (F-Stop)

- a. What is it and what does it do?
- b. F-stop designations
- c. How does it affect exposure?
- d. Depth of field (DOF)
- e. Examples of (DOF)

Exercise 6 – Aperture

COURSE OUTLINE (CONT.)

12. ISO

- a. What is it and what does it do?
- b. ISO designations
- c. How does it affect image quality?
- d. Camera model differences
- e. Extended/expanded ISO's and noise

Exercise 7 – ISO

13. Exposure Part 1

- f. Exposure triangle
- g. Order of changes
- h. Cheat sheets
- i. Light meter
- j. Metering modes and how to change them
- k. Meter usage examples

Exercise 8 – Metering

14. Exposure Part 2

- l. A different way to look at it
- m. Reciprocity in photography

15. Image Information

- n. Playback display options
- o. Shooting data
- p. Histograms
- q. Overviews
- r. Highlights

16. White Balance

- s. What is it
- t. How to change it
- u. White balance examples

Exercise 9 – White Balance

1. Flash

- a. Types of flash
- b. Flash intensity or output
- c. Flash modes
- d. Technique - Reflective surfaces
- e. Technique - Bounce flash
- f. Technique - Fill Flash
- g. Technique - Diffused Flash
- h. Flash Compensation
- i. Adjusting flash power levels

Exercise 10 – Flash

2. Critique of Examples

- a. Problem solving images
- b. Summary of camera set up procedures

Written Exam

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