

Digital Photography

Week 1 - Basic Concepts

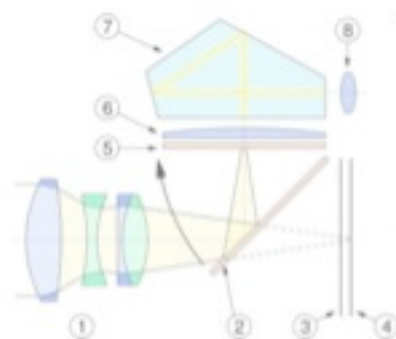
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What you will need

- SLR Camera
- "Normal" zoom lens (approx 28-70 equiv)
- 1G or more flash ram
- Computer
- Some means of printing

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Single Lens Reflex (SLR)



1. Lens
2. Mirror
3. Shutter
4. Sensor
5. Focusing screen
6. Condensing lens
7. Prism
8. Eyepiece

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SLR (Continued)

- # Interchangeable lenses
- # Full manual control
- # Best possible image quality
- # Highly responsive

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Manual Mode

- # Gives the most control
- # Puts you in charge, not the camera
- # Slows you down, makes you think
 - # (This is a good thing!)

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Automatic Modes

- # We are going to avoid these
- # They take you out of the process
- # Faster, but offer little control
- # Unpredictable results
- # Useful in a pinch, but not most of the time

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Camera Settings

- # Manual Mode
- # JPEG, Fine, highest resolution
- # Normal Contrast
- # Normal Color (sRGB)
- # Normal Sharpening
- # Auto White Balance (for now)
- # Avoid auto modes, avoid RAW for now

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Basic principles

- # Exposure
 - # Meter
 - # ISO
 - # Shutter Speed
 - # Aperture

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Exposure

- Exposure = how much light gets to the sensor
- For each sensor there is a "correct" exposure
- This is judged by the Meter
- Controlled by ISO, Shutter Speed and Aperture

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The Meter

-2...1...0...1...2+

- ❑ The light meter helps you judge correct exposure
- ❑ Too much - overexposure
- ❑ Too little - underexposure
- ❑ You want the meter "just right" - centered at Zero

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The Meter Continued

- ❑ If your meter isn't centered, your photo **WILL NOT** have a correct exposure
- ❑ **ALWAYS** make sure your meter is centered!
- ❑ Really!
- ❑ (We'll talk about the exceptions later)

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ISO

- ⚡ This is how sensitive the camera is to light
- ⚡ Typical range - 100-1600
- ⚡ Higher numbers are more sensitive, but "noisier"
- ⚡ Set ISO depending on the light available

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ISO Continued

- ☛ Choose ISO value depending on available light
- ☛ Bright sun - low ISO (100, 200)
- ☛ Shade/interior - mid/high ISO (400, 640, 800)
- ☛ Dark interior/night - super-high ISO (1250, 1600, 3200)
- ☛ ISO will help determine your other settings

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Shutter Speed

- ☐ The shutter opens and closes to allow light to reach the sensor
 - ☐ The longer it's open, the more light gets through (and vice versa)
- ☐ Faster shutter speeds can freeze motion
- ☐ Too slow a shutter speed can cause blur

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Aperture

- ☐ The aperture is like the pupil in your eye - a hole in the iris that lets light through to the sensor
- ☐ Larger apertures let in more light
- ☐ A typical aperture scale - 1.4, 2, 2.8, 4, 5.6, 8, 11, 16, 22, 32
 - ☐ Each one is 1/2 or 2x the one before/after it
 - ☐ Larger numbers represent smaller apertures (and vice versa)
- ☐ Aperture controls Depth of Field (which we will talk about next week)

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How to control exposure

- ❑ Set your ISO according to the light available
- ❑ Frame your image
- ❑ Focus
- ❑ Set either your shutter or aperture according to the creative effect desired
- ❑ Adjust the other according to the meter
- ❑ Then you can hit the shutter!

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How to shoot

- ❑ Forget that the camera's digital – shoot like you would with film
- ❑ Avoid “chimping” – trust yourself!
- ❑ Don't go through photos deleting the “bad” ones – save everything, all the time

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Printing options

- ❑ Inkjet home printer
 - ❑ Pro - Do it yourself convenience
 - ❑ Con - Difficult to get color right
- ❑ Lab
 - ❑ Pro - they'll do it all for you
 - ❑ Con - pick up/drop off, can be \$\$

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Contact sheets

- Print catalog pages so we can all see what you've done each week
- Software -
 - ImageBuddy (Mac only)
 - Photoshop/Photoshop Elements
 - The sw that came with your camera

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Workflow

- Format your card
- Go out and shoot
- Come home, download all photos immediately
- Burn all photos to CD/DVD
- Print a contact sheet
- Review photos, decide which are the best
- Print your favorites - bring them to class

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