DIGITAL CAMERA BASICS

BRIC
AGENDA

• Part 1: Camera Basics
• Part 2: Composition
PART 1: CAMERA BASICS

• The exposure triangle
• Depth of field, macro, focus
• Shooting modes: Automatic, AV, TV, Manual
• White balance
• Holding the camera, angles, position
THE EXPOSURE TRIANGLE

ISO

Noise

The Exposure Triangle

Depth of Field

Motion Blur

Aperture

Shutter Speed
LIGHT METER
THE EXPOSURE TRIANGLE: ISO

- Film speed, sensor sensitivity: 100, 200, 400, 800, 1600, 3200
- Each setting is double or half the brightness than the previous
- Low ISO = sharper pictures
- High ISO = lowers the light you need
- Trade off: while it offers more flexibility, the higher the ISO, the grainier the picture
Digital Rebel T1i  ISO 100-12800  "Standard" Noise reduction  50% crops
ISO 100

ISO 3200
A few questions to ask yourself:
1. Do I have a tripod?
2. Do I want a grainy shot?
3. How is the light?
4. Is the subject still or moving around?

Situations where you may need a higher ISO:
1. Indoor sporting events
2. Concerts, galleries, churches
3. Birthdays, or dinners
THE EXPOSURE TRIANGLE: ISO

Rules of thumb:
Use a tripod if you can
Try to shoot with the lowest ISO possible
Rest camera on a solid surface if there's no tripod
Hold your breath
LET'S TRY IT!

Set your camera to the following manual settings:
Shutter Speed: 1/60
Aperature: 2.8

ISO:
Shoot the same object four times with four different ISO settings, write down which picture has which ISO.

What do you notice?
THE EXPOSURE TRIANGLE: SHUTTER SPEED
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Refers to how much time the shutter is open (in seconds)
1/4000, 1/2000, 1/1000, 1/500, 1/250, 1/125, 1/60, 1/30, 1/15, 1/8
1 second, 10 seconds, 30 seconds etc
Faster shutter speed = freezes action, less light
Slower shutter speed = motion blur, more light
Most cases, use 1/60th
Less than 1/60th will probably cause camera shake
THE EXPOSURE TRIANGLE: SHUTTER SPEED

Rules of thumb:
Use image stabilization
Are things moving?
Focal length: the longer the lens, the more shake
Use a tripod!
LET'S TRY IT!

Set your camera to the following manual settings:
ISO: 200 - 400
Aperature: 2.8

Shutter Speed:
Shoot the same (moving) object four times with four different shutter speeds, write down which picture has which shutter speed.

What do you notice?
THE EXPOSURE TRIANGLE: APERTURE
"The size of the opening in the lens." Measured in f stops. Double or half the light depending on which direction you go. The larger the aperture, the more light that comes in. Smaller the number, the larger the aperture (confusing!)

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DEPTH OF FIELD

Depth of Field: the smaller the aperture, the larger the depth of field. The larger the aperture, the shallower the depth of field.

For example:
f2.8 - large aperture, shallow depth of field
f8 - narrow aperture, large depth of field
SHALLOW DEPTH OF FIELD
SHALLOW DEPTH OF FIELD
LARGE DEPTH OF FIELD
LARGE DEPTH OF FIELD
DEPTH OF FIELD

Rules of thumb:
Larger the number, the smaller the aperture
Good to use for focusing attention on something
Aperture and shutter speed go hand in hand
LET'S TRY IT!

Set your camera to the following manual settings:
Shutter Speed: Vary
ISO: 100 or 200

Aperture:
Shoot the same object four times with four different aperture settings, write down which picture has which aperture.

What do you notice?
MACRO

This means getting really REALLY close to subject
Typically a setting on a camera
Need plenty of light, very little movement
Low ISO, or keep the ISO on Auto
SHOOTING MODES: AUTO, AV, TV, MANUAL

Auto: adjust nothing
AV: Aperture Priority, adjust the aperture, the camera adjusts shutter speed
TV: Shutter speed priority: adjust shutter speed, the camera adjusts the aperture
Manual: adjust everything
WHITE BALANCE
HOLDING YOUR CAMERA
HOLDING YOUR CAMERA
HOLDING YOUR CAMERA
HOLDING YOUR CAMERA
PART 2: COMPOSITION

Rule of thirds
Types of shots: wide, medium, close, extreme close up
Choosing subjects
Thinking like a painter
Foreground, mid ground, background
RULE OF THIRDS

A way to balance the shot
Basic principle: break the shot into 9 equal boxes
Use the 9 boxes to frame different elements in your shot
Use the 4 lines as guides for composition
Use the 4 intersections as points of focus

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RULE OF THIRDS

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LET'S TRY IT!

Go out and shoot 10-15 pictures utilizing what you learned with the rule of thirds. Shoot vertical as well as horizontal pictures.
TYPES OF SHOTS

Extremely wide - subject not visible
Very wide - subject is barely visible
Wide - subject takes up the whole frame
Mid - shows part of the subject with the impression of the whole
Mid close up - chest and shoulders
Close up - certain feature or part of subject takes up the frame
Extreme close up - shows a lot of detail of subject
VERY WIDE SHOT
MEDIUM CLOSE UP SHOT
CLOSE UP SHOT
LET'S TRY IT!

Get into pairs, and try to take two or three of each type of shot (except for the extreme wide shot)

Wide
Mid
Medium close up
Close up
Extreme close up
CHOOSING SUBJECTS

Rules of thumb:
Keen observation: look at things from different vantage points
How's the light?
Remember the rule of thirds
Tripods are always helpful
THINK LIKE A PAINTER

The eye loves to move across the picture
Look for shapes or lines not necessarily detail
Explore color tone, brightness & contrast, light
Fill the "canvas" with energy, movement
Draw the eye into the picture
Use diagonals
SHAPES
SHAPES
COLOR AND LIGHT
COLOR AND LIGHT
BRIGHTNESS AND CONTRAST
BRIGHTNESS AND CONTRAST
ENERGY AND MOVEMENT
ENERGY AND MOVEMENT
DRAW THE EYE IN
DRAW THE EYE IN
DIAGONALS
DIAGONALS
CLASS EVALUATION
THANK YOU!

If you are interested in more BRIC classes, please visit: www.bricartsmedia/org/bcme
PART 3: PHOTO MANIPULATION

- Cropping images
- Brightness & Contrast
- Hue & Color Saturation
- Bracketing images
CROPPING IMAGES: WHY?

- Correct framing mistakes
- Composition (rule of 3rds)
- Edit out distractions
- Trying different formats
CORRECTING FRAMING MISTAKES

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COMPOSITION, RULE OF THIRDS

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DIFFERENT TYPES OF CROPS
BRIGHTNESS AND CONTRAST
BRIGHTNESS AND CONTRAST
BRIGHTNESS AND CONTRAST
BRIGHTNESS AND CONTRAST
HUE AND SATURATION
SATURATE, HUE
DESATURATE
DESATURATE
BRACKETING
BRACKETING
BRACKETING

- Used when one shot cannot capture everything
- Taking several shots with different settings
- Use an image editor to put them all together
FILTERS

- blur, sharpen
- red eye removal
- artistic