

# Photo Arts 1 Fall Quarter 2010.1

Instructor: Joe Ziolkowski “ Joe Z. “ 20100907

## Assignment #2: “Camera Basics”

Creative Shutter Speed Techniques.

Creative Depth of Field Techniques.

READ ALL BELOW INFORMATION CAREFULLY BEFORE DOING ASSIGNMENT!



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Due: September 21, 2010 (Crit).

### Objective:

This assignment is designed to refine and master creative camera functions. Using sharpness and motion control through the correct use of Shutter Speed in relationship to the Depth of Field and the use of the aperture. Students will also continue to develop their skills using digital cameras, lenses, camera settings, color theory, quality of light and digital work flow.

### Assignment Overview for Shutter Speed:

- Use a slow shutter speed to create a sense of motion and time.
- Use a fast shutter speed to create a sense of stop action in time.
- Use of experimentation to create an unexpected and creative photograph. (Optional).



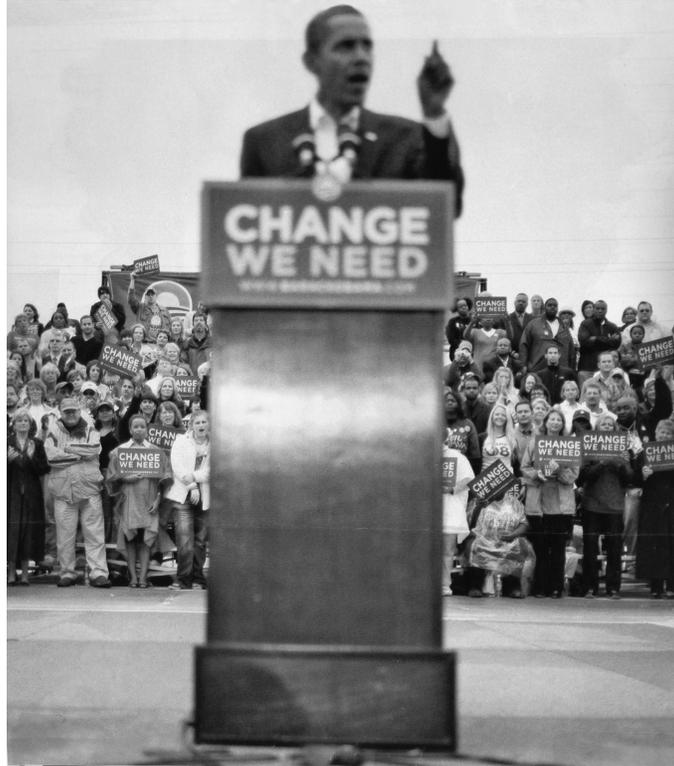
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Equipment and Supplies Needed:

- DSLR Camera, light meter, journal for shooting log(s).
- Digital files, we will talk about this.
- Tripod (optional).
- Self timer (optional).
- Cable release (optional).

Procedure:

- Explore a variety of subjects and experiment with fast shutter speeds and slow shutter speeds as discussed in class and in the readings.
- Do try applying equivalent exposures with some of your subject matter to create images using slow shutter speed and fast shutter speed of a common subject when possible.
- Try illustrating the extremes of shutter techniques.
- Using a very fast shutter speed, or a very slow shutter speed.



Change We Need, Barack Obama 2008 Unknown Photographer.

Assignment Overview for Depth of Field:

- Use a large aperture to isolate subjects through shallow Depth of Field.
- Use a small aperture to give a sense of expanse and detail through great Depth of Field.
- Use of wide angle and telephoto lenses to create variations in Depth of Field.



20081227 G.I. Joe. Manza Mo Coast, Okinawa, Japan

Joe Ziolkowski © 2008

Submit:

- Follow instructions for submitting work for critiques and grades as discussed in class.
- On your original stationary that has all your contact information.
- An assessment for the assignment.
- In the assessment, the camera settings you used to achieve the digital files you submitted.
- At least 4 - digital files.
  - a. 1 Photograph using Fast (stop action).
  - b. 1 Photograph using Slow Shutter Speed (blur movement).
  - c. 1 Photograph using Great Depth of Field.
  - d. 1 Photograph using Shallow Depth of Field.
  - e. 1 Experimental print using both shutter and depth of field techniques. (optional).
- All files should be as “full frame” as possible.
- Meta Data for the category of shutter speed or depth of field used.
- Meta Data to code your.

Shutter Speed as a tool for motion control.

In this as in all assignments choose subject matter that works for what you are doing. Don't just do the assignment to get it done. Creative thinking counts to make your portfolio more dynamic and interesting. When panning a subject for instance, don't just go to a street corner and wait for a car to go by. Use the effect to your advantage. Say something about your subject. Set up a situation to which panning is an integral part of the image.

When exposing for your photograph, experiment with the effects of shutter to illustrate the visual possibilities of different speeds as they relate to rate of movement of your subject. Find subjects that are moving, try to find a variety of different rates of movement.

For each, photograph them.

1. Same subject at a fast shutter speed, 1/250” or higher, the FASTEST shutter speed you can get!
2. Same subject at a middle shutter speed, 1/60”.
3. Same subject at a slow shutter speed 1/4” or slower.  
You may need a tripod for the slower speeds.
4. Practice panning. Find subjects moving in one direction and at a shutter speed of 1/30”, or 1/15” move camera with them to capture subject. At least 4 frames of panning.
5. Repeat with several different subjects until you feel confident you have a good understanding of fast and slow shutter speed.

After you have shot your files and edited in Lightroom, observe how changing the aperture and shutter speed combinations gives a visual effect to the images. What worked well visually? What did not? In what kinds of situations did the effect of motion and the use of the Depth of Field become critical to the visual impact of the image. Make note of these and then further explore these situations, concepts. How can you apply the information to improve on your ideas and try to work on a new idea?

After looking at your first attempt of photographing, take these ideas and move beyond shutter speed or aperture “effect” and into conceptualizing your subject in terms of most appropriate

combination for the subject. For a given subject, visualize what you want the image to look like and make shutter choices accordingly. Your task is to express movement and space through the use of aperture and shutter. How do the two intersect?

Some ideas:

- a. Freeze a moment in time of swiftly moving subjects.  
Show passage of time as FROZEN.  
Show time as CHAOTIC.
- b. Show speed by blurring the moving subject.
- c. Show movement by moving the camera instead of the subject or along with a subject (panning).
- d. Experiment with dusk and dawn or night photography using long shutter speeds.
- e. Isolate a subject from its surroundings.
- f. Give a feeling of expansion or depth.
- g. Play with the scale possibilities of foreground /background interactions.

### Depth Of Field

Depth of field is the area of acceptable sharpness in front of and behind the point of critical focus.

1. Large or Great Depth of Field.  
The photograph will show sharpness stretching from the closest foreground element, across the important elements of the scene, and keeping the background sharp (Hyperfocal Focusing) or as sharp as possible. Be sure to compose the photograph so that there is something no farther away than 10 feet which is sharp.
2. Small or Shallow Depth of Field.  
The photograph will show a very small or shallow area of sharpness, isolating the subject within the photograph. Use Equivalent Exposures to make sure the depth of field is not too small. Usually you want the main subject to be the close focus point in the foreground with a blurred, out of focus background.

Three Factors Which Affect Depth of Field:

1. Aperture (f/stop)
  - a. The smaller the aperture opening, the greater the depth of field.  
OR, the larger the f/stop number the larger the depth of field.
  - b. The larger the aperture opening, the less depth of field.  
OR, the smaller the f/stop number the smaller the depth of field.
2. Focal Length
  - a. The shorter the focal length of the lens, the greater the depth of field.
  - b. The longer the focal length of the lens, the less depth of field.
3. Camera to Subject Distance
  - a. The greater the distance, the greater the depth of field.
  - b. The shorter the distance, the less depth of field.

### Equivalent Exposures:

Use equivalent exposures to achieve the depth of field you desire, a correct exposure, and a shutter speed which produces sharp files. Make at least 6 correct equivalent exposures. Use average or Gray Card Metering for the starting point for a correct exposure. Then use equivalent exposure(s) with more and/or less depth of field. Record both average or Gray Card exposure and equivalent exposure on the shooting log.

For example, you want to make a photograph with a large depth of field. Your light meter reading from the average of gray card is 1/500 at f/5.6.

To get a f/stop and shutter speed combination which gives a large depth of field and still gives a correct exposure:

Start at	(stop action)	1/500 at f/5.6	
	2x as much light		1/2 as much light
		1/250 at f/8	(larger D/F)
	2x as much light		1/2 as much light
		1/125 at f/11	(even Larger D/F)
	2x as much light		1/2 as much light
		1/60 at f/16	(Largest D/F w/Slowest Shutter Speed to Hand Hold)
	2x as much light		1/2 as much light
	(blur action)	1/30 at f/22	(More D/F, But Tripod Needed)

### Use of Light:

- The use of light will be an important aspect of this assignment. Work with the “Qualities of Light” as discussed in class whenever possible.
- Try using natural available light whenever possible.
- Stay away from artificial light, tungsten, fluorescent or mixed lighting for now.
- Do not use a electronic flash at any point during this assignment.
- Try using natural available light whenever possible.