## Overview

This assignment focuses on understanding and utilizing histograms and exposure settings to achieve the desired photographic outcome. Students will learn how to interpret histograms and adjust exposure settings using priority modes for optimal results.

## Learning Objectives

- Understand how to read and interpret histograms to evaluate exposure.
- Learn to use aperture priority or shutter priority modes for exposure control.
- Practice adjusting exposure settings based on histogram feedback.

## Related Reading

Before you start, read these related blog posts to deepen your understanding:

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|---|---|---|
| What Is Dynamic Range In Photography | Exposure Bracketing A Guide For Photographers | Histogram Explained |
| Exposure Review | Tonal Balance | |

## Before You Shoot

- Ensure your camera is set to ISO 200 for consistent exposure.
- Familiarize yourself with the histogram display on your camera.
- Select a location with varying light conditions for diverse exposure challenges.
- Prepare a notebook to jot down your observations and settings used.
- Charge your camera battery and ensure you have sufficient memory card space.

## Assignment Tasks

1. Use aperture priority mode at f/4 with ISO 200 fixed, letting the camera adjust shutter speed, and capture a landscape scene, then analyze the histogram for exposure accuracy.
2. Shoot a portrait using aperture priority mode at f/2.8 with ISO 200 fixed, observing the depth of field and checking the histogram for proper exposure.
3. Capture a moving subject using shutter priority mode at 1/1000s with ISO 200 fixed, allowing the camera to adjust aperture, and review the histogram for motion blur or freeze.
4. Photograph a high-contrast scene in aperture priority mode at f/5.6 with ISO 200 fixed, then analyze the histogram to identify clipping in highlights or shadows.
5. Shoot an indoor scene with mixed lighting conditions using shutter priority mode at 1/250s with ISO 200 fixed, letting the camera adjust aperture, and evaluate the effectiveness via the histogram.
6. Experiment with long exposure photography using shutter priority mode at 1/4s with ISO 200 fixed, noting how the histogram reflects the exposure over time.

## Stretch Tasks

- Create a high dynamic range (HDR) image by taking multiple exposures using both priority modes, then combine them in post-processing to see how histograms change.
- Conduct a field study by capturing the same scene at different times of the day in both priority modes, analyzing how the histograms differ with varying natural light.

## DO / DON'T

### DO

- ✓ Do check the histogram after each shot to ensure proper exposure.
- ✓ Do use the exposure compensation function to adjust exposure based on histogram feedback.
- ✓ Do take notes on the settings used for each photograph and their corresponding histograms.
- ✓ Do practice shooting in various lighting conditions to understand histogram behavior.
- ✓ Do review the images on a computer screen to get a clearer view of the histogram.

### DON'T

- ✗ Don't ignore the histogram; always check it after taking a photo.
- ✗ Don't rely solely on the camera's auto mode; use priority modes for better control.
- ✗ Don't shoot without considering the lighting conditions in relation to the histogram.
- ✗ Don't forget to experiment with different settings to see their effects on exposure.
- ✗ Don't assume that a well-exposed image will always yield a balanced histogram.

## Reflection Questions

- How did the histogram change with different settings in aperture or shutter priority mode?
- What challenges did you face in interpreting the histogram while shooting?
- How does understanding the histogram influence your approach to exposure in your future photography?
- In what ways do you think using priority modes has improved your shooting experience?

## Technical & Creative Focus

**Technical:**

- Use the histogram to check if your image is overexposed or underexposed.
- Adjust exposure compensation if your histogram indicates clipping on either end.
- Utilize the highlight alert feature to check for blown highlights in your images.
- Practice shooting in both aperture priority and shutter priority modes to see how it affects exposure.
- Study the differences in histograms between images taken in different lighting conditions.

**Creative:**

- Experiment with different apertures to see how depth of field affects the histogram.
- Try capturing motion using shutter priority and assess its impact on exposure.
- Incorporate backlighting to challenge your histogram reading skills.
- Create a series of images with different exposures and analyze their histograms for learning.
- Use reflections or shadows in your scene to explore how they affect exposure and histogram.