Overview

The Exposure Triangle Mastery assignment is designed to deepen your understanding of the relationship between aperture, shutter speed, and ISO. By mastering these three elements, you will gain the ability to control the exposure of your images, enhancing both their aesthetic appeal and storytelling potential.

Learning Objectives

- Understand how aperture affects depth of field and exposure.
- Learn how shutter speed impacts motion blur and exposure.
- Master ISO settings to control noise and sensitivity in various lighting conditions.

Related Reading

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

What Is Exposure In Photography	What Is Iso In Photography	What Is Shutter Speed
What Is Depth Of Field	What Is Manual Exposure In Photography	What Is Dynamic Range In Photography

Before You Shoot

- ■ Familiarize yourself with your camera's manual settings.
- ■ Choose a location with varied lighting conditions for diverse practice.
- ■ Prepare a notebook to document your settings and outcomes.
- ■ Ensure your camera battery is charged and memory card has ample space.
- ■ Set your camera to manual mode to have full control over the exposure triangle.

Assignment Tasks

1. Capture a portrait using aperture priority mode at f/2.8, 1/125s, ISO 200 to achieve a blurred background.
2. Photograph a moving subject in action with a shutter speed of 1/500s, f/4, ISO 400 to freeze the motion.
3. Shoot a landscape scene at f/8, 1/60s, ISO 100 in manual mode to achieve a balanced exposure across the frame.
4. Create a night scene using a long exposure of 10s, f/5.6, ISO 800 to capture light trails and star movement.
5. Experiment with backlighting by shooting at f/4, 1/250s, ISO 400 to create a silhouette effect.
6. Take a series of images adjusting ISO settings (ISO 100, 400, 1600) while keeping aperture and shutter speed constant at f/5.6 and 1/125s.

Stretch Tasks

- Shoot in a completely dark environment using a wide aperture (f/1.4), a long shutter speed (30s), and a high ISO (6400) to explore the limits of your camera's capabilities.
- Create a time-lapse sequence by adjusting your settings (f/8, 1/500s, ISO 100) to capture gradual changes in light over several hours.

DO / DON'T

DO	DON'T
✓ Do experiment with different combinations of aperture, shutter speed, and ISO to see their effects on exposure.	✗ Don't rely solely on auto mode; practice using manual settings to understand the exposure triangle.
✓ Do take notes on each shot to track which settings worked best in varying conditions.	✗ Don't ignore the histogram; it is a crucial tool for evaluating exposure accuracy.
✓ Do practice in different lighting situations, including bright sunlight and low light, to understand how to adjust the exposure triangle.	✗ Don't be afraid to experiment with extreme settings; sometimes unconventional choices yield the best results.
✓ Do review your images on a computer to analyze exposure and make adjustments for future shoots.	✗ Don't forget to consider the impact of motion on shutter speed when photographing fast-moving subjects.
✓ Do use a tripod for long exposure shots to avoid camera shake.	✗ Don't overlook the importance of white balance; it can significantly affect the mood of your images.

Reflection Questions

- How did varying the aperture impact the depth of field in your photographs?
- What challenges did you face when adjusting shutter speed for motion capture?
- In what scenarios did high ISO settings produce acceptable noise levels?
- How did you use the histogram to improve your exposure decisions?

Technical & Creative Focus

Technical:

- Use aperture priority mode to experiment with depth of field; set your aperture to f/2.8, shutter speed to auto, ISO 200.
- In low light, switch to a slower shutter speed; try 1/30s, f/4, ISO 1600 to capture more light without introducing excessive noise.
- Use manual mode to balance all three elements; set f/5.6, 1/125s, ISO 400 for a well-exposed landscape shot.
- Adjust exposure compensation to +1 when shooting against bright backgrounds to prevent underexposure.
- Experiment with different metering modes; use spot metering to focus on a subject, setting f/4, 1/60s, ISO 800.

Creative:

- Use a wide aperture (f/1.8) to create a shallow depth of field for portraits, isolating your subject from the background.
- Incorporate motion blur creatively by using a slower shutter speed (1/15s) while panning with a moving subject.
- Experiment with high ISO settings (ISO 3200) to capture candid moments in dimly lit environments without a flash.
- Utilize the histogram to ensure a balanced exposure; adjust settings until the graph shows no clipping on either end.
- Create a series of images at different apertures (f/2.8, f/5.6, f/11) to visually demonstrate the effect of depth of field.