Overview

This assignment focuses on understanding ISO and its impact on noise in photography. You will practice using fixed ISO settings in conjunction with aperture and shutter priority modes to achieve desired exposure while controlling noise levels.

Learning Objectives

- Understand the relationship between ISO, exposure, and noise.
- Learn to use fixed ISO settings to manage noise while using priority modes.
- Develop skills to adjust camera settings based on lighting conditions.

Related Reading

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

What Is Iso In Photography	Low Light Photography	Exposure Bracketing A Guide For Photographers
Noise Reduction		

Before You Shoot

- Choose a well-lit outdoor location to start with base ISO settings.
- Familiarize yourself with your camera's aperture and shutter priority modes.
- Prepare a notebook to record your settings and outcomes for each shot.
- Ensure your camera battery is charged and your memory card has sufficient space.
- Select a lens that allows for a variety of aperture settings.

Assignment Tasks

1. Use aperture priority mode at f/4 with ISO 200 fixed, letting the camera set shutter speed for depth of field control in a bright outdoor setting.
2. Use shutter priority mode at 1/250s with ISO 200 fixed, allowing the camera to set aperture to freeze motion in a busy street scene.
3. In low light, switch to ISO 800 and use aperture priority mode at f/2.8, letting the camera adjust shutter speed for depth of field.
4. Capture a series of images in a dimly lit room at ISO 400 using shutter priority mode at 1/60s to observe noise levels.
5. Use aperture priority mode at f/5.6 with ISO 200 fixed during golden hour, letting the camera adjust the shutter speed.
6. Experiment with ISO settings by shooting the same scene at fixed ISO values of 200, 800, and 1600 in low light using aperture priority.

Stretch Tasks

- Conduct a noise comparison by taking photos at ISO 100, 400, and 1600 in identical lighting conditions using aperture priority mode.
- Create a series of images showcasing motion blur at different shutter speeds while keeping ISO fixed at 200.

DO / DON'T

DO

- ✓ Do experiment with different fixed ISO values to understand how they affect image quality.
- ✓ Do take notes on your settings and results for future reference.
- ✓ Do use a tripod in low light situations to prevent camera shake.
- ✓ Do compare images taken at different ISO settings to visually assess the noise.
- ✓ Do consider the creative implications of noise in your photography.

DON'T

- ✗ Don't set all three exposure variables manually; use priority modes instead.
- ✗ Don't be afraid to raise ISO in low light, but be mindful of the noise it introduces.
- ✗ Don't shoot in bright conditions with a high ISO unless experimenting with noise.
- ✗ Don't ignore the effects of aperture on the overall image quality at a fixed ISO.
- ✗ Don't forget to review your images for noise and detail after shooting.

Reflection Questions

- How does adjusting ISO impact the overall quality of your images?
- What were the challenges you faced when using fixed ISO settings?
- How did the choice of aperture influence noise levels in your photos?
- In what scenarios would you prioritize ISO over other exposure settings?

Technical & Creative Focus

Technical:

- Set a fixed ISO (e.g., ISO 200) to minimize noise in bright conditions.
- Use aperture priority mode to control depth of field while allowing the camera to adjust shutter speed.
- Experiment with different apertures to see how they affect exposure and noise at a fixed ISO.
- Observe how higher ISO settings affect image quality in low light.
- Evaluate the trade-offs between ISO, aperture, and shutter speed in your images.

Creative:

- Explore the creative effects of using different apertures with fixed ISO settings.
- Capture images with varying depths of field to assess noise at a set ISO.
- Try to create motion blur using a fixed ISO in shutter priority mode.
- Look for interesting textures or patterns in low-light conditions to test noise levels.
- Experiment with backlighting to see how it interacts with ISO settings.