



## Overview

Understanding shutter speed is essential for capturing motion effectively in photography. This assignment focuses on mastering shutter speed techniques to either freeze fast action or create artistic motion blur, allowing photographers to manipulate time within their images.

## Learning Objectives

- Identify the appropriate shutter speed for different types of motion.
- Apply creative techniques to convey motion through intentional camera movement.
- Balance shutter speed with aperture and ISO for optimal exposure.

## Related Reading

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

[What Is Shutter Speed](#)

## Before You Shoot

- Choose a location with dynamic movement, such as a sports event or busy street.
- Prepare your camera by ensuring it is set to manual or shutter priority mode.
- Check your lens for cleanliness to avoid unwanted artifacts in the images.
- Have a tripod or stabilizer ready for longer exposure shots.
- Familiarize yourself with the light conditions and adjust your ISO accordingly.

## Assignment Tasks

1. Capture a moving subject, like a cyclist, using settings of f/5.6, 1/1000s, ISO 200 in shutter priority mode to freeze the action.
2. Photograph a busy street scene at dusk with settings of f/8, 1/15s, ISO 800 to create motion blur of vehicles while keeping the background sharp.
3. Shoot a waterfall using settings of f/16, 1/2s, ISO 100 in manual mode to achieve a smooth, flowing water effect.
4. Create a panning shot of a running dog with settings of f/4, 1/125s, ISO 400, following the subject's movement to blur the background.
5. Use a slow shutter speed of 5s, f/11, ISO 50 to capture the stars moving in the night sky, ensuring a stable tripod is used.
6. Experiment with light trails from cars using f/8, 10s, ISO 100 to capture the vibrant movement of lights in a long exposure.

## Stretch Tasks

- Create a series of images combining multiple shutter speeds in one frame using double exposure techniques to show both frozen and blurred motion.
- Capture a high-speed sports event using burst mode at 1/2000s, f/2.8, ISO 400 to capture a sequence of motion in rapid succession.



## DO / DON'T

DO	DON'T
<ul style="list-style-type: none"><li>✓ Do practice with different shutter speeds to see their effect on motion.</li><li>✓ Do use a tripod for long exposure shots to avoid camera shake.</li><li>✓ Do adjust your ISO to maintain exposure when changing shutter speeds.</li><li>✓ Do experiment with different apertures to see how they affect depth of field with motion.</li><li>✓ Do review your images frequently to assess the effectiveness of your shutter speed choices.</li></ul>	<ul style="list-style-type: none"><li>✗ Don't rely solely on automatic settings; learn to control shutter speed manually.</li><li>✗ Don't shoot in low light without adjusting ISO or using a tripod.</li><li>✗ Don't forget to check your focus mode; use continuous focus for moving subjects.</li><li>✗ Don't ignore the effects of motion blur; sometimes it can enhance the image.</li><li>✗ Don't be afraid to experiment; some of the best images come from unexpected settings.</li></ul>

## Reflection Questions

- How does changing shutter speed influence the perception of motion in your images?
- What challenges did you face when trying to capture motion, and how did you overcome them?
- In what situations did you find slower shutter speeds to be more beneficial for your photography?
- How did your understanding of shutter speed improve your overall photography skills?

## Technical & Creative Focus

### Technical:

- Set your camera to shutter priority mode (Tv or S) and select a shutter speed of 1/500s, f/4, ISO 200 to freeze fast-moving subjects.
- Use manual mode with 1/30s, f/8, ISO 100 for capturing motion blur in a panning shot.
- Adjust to a slower shutter speed of 1/2s, f/11, ISO 400 for light trails in low light conditions.
- Experiment with exposure compensation by setting it to +1 or -1 to control highlights or shadows while using shutter speeds of 1/60s.
- Utilize continuous focus mode (AI Servo or AF-C) to keep moving subjects sharp while using faster shutter speeds.

### Creative:

- Experiment with intentional camera movement (ICM) by moving your camera vertically or horizontally during a 1/4s exposure to create abstract motion effects.
- Use a zoom burst technique by zooming in or out during a 1/15s exposure to create a dynamic radial blur.
- Capture water movement by using a shutter speed of 1/4s, f/16, ISO 100 to create a silky effect on waterfalls.
- Explore the effects of light trails by shooting at 1s, f/5.6, ISO 200 to capture moving lights in urban environments.
- Combine fast and slow shutter speeds in a single frame by using multiple exposures or layering techniques in post-processing.