Podcast and video for science communication

Equipment and Setup for Video Podcasting

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Analog Camera vs Digital Camera

Analog Camera

- Capture Medium: The process of recording images involves chemical reactions on a light-sensitive material (i.e. *film*).
- Image Formation: The exposure of film to light causes chemical changes in its sensitive material, resulting in a image.
- Storage: Images are stored directly on the physical film roll or sheet.
- Review Process: Images cannot be reviewed immediately but the film needs to be chemically processed.

Analog Camera vs Digital Camera

Digital Camera

- Capture Medium: Uses an electronic image sensor composed of millions of photosensitive pixels.
- Image Formation: Light hitting the sensor causes each pixel to accumulate an electrical charge directly proportional to the light exposure.
- Storage: Images/videos are directly stored as digital files (e.g. JPEG, RAW, MOV, MP4) on memory cards or internal storage.
- Review Process: Images and videos can be eventually reviewed directly on the camera's LCD screen.

Reflex vs Mirrorless

Reflex:

Uses a system of mirrors to direct light from the lens to the optical viewfinder.

Mirrorless:

In mirrorless cameras there is no mirror. This camera system utilized an electronic viewfinders (EVFs) and/or rear screens to display the images.

There are two types of mirrorless cameras based on the size of their image sensors: *Full-Frame* and *APS-C (Advanced Photo System - Classic)*, with the former having larger image sensor than the latter.

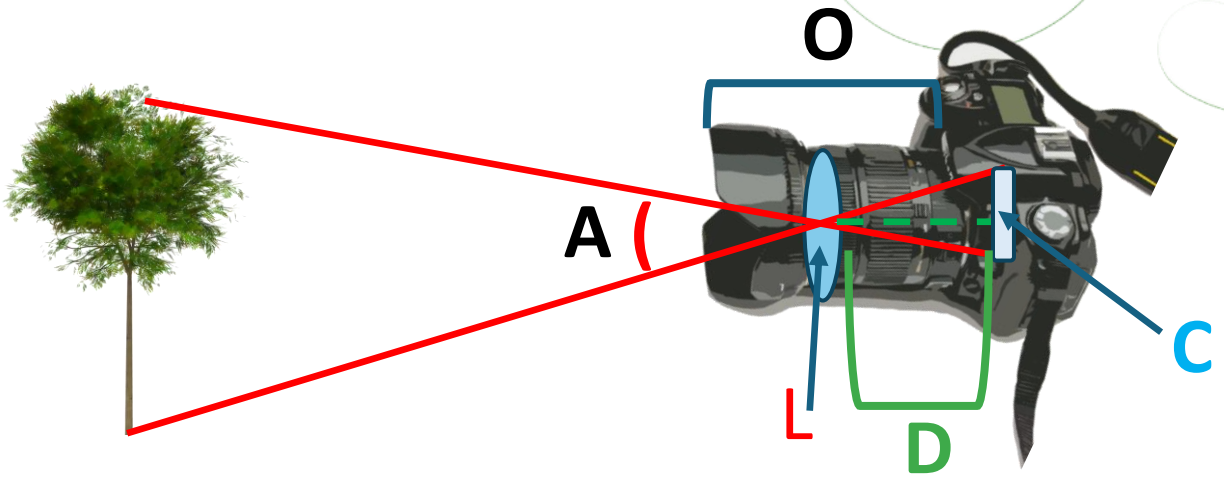
Camera objective

A camera objective (**O**) (optics or photographic lens or camera lens) is an optical system composed of one or more lenses, designed to collect and focus light from a scene onto the sensor of the camera (digital cameras) or onto the film

(analog cameras).

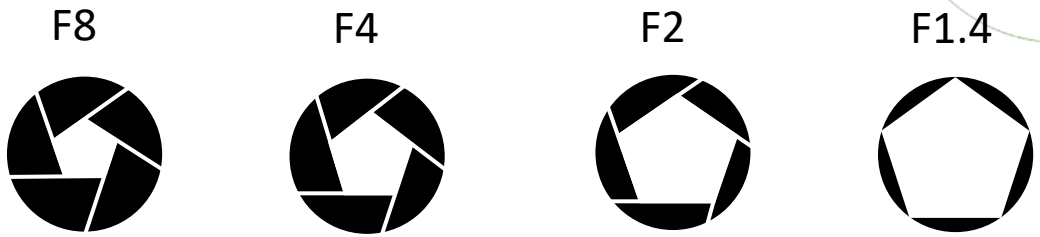
The focal length of a lens is the distance (D), measured in mm, between the sensor plane (C) and the optical center (L) of the lens. This determines the angle of view (**A**) of the lens.

A 35 mm lens allows for a wider field of view compared to a 70 mm lens, which instead allows for more zoom on the subject.



Lens aperture, shutter speed, and ISO

- **Lens aperture:** It's a camera aperture located inside the lens itself that determines the amount of light that enters. It includes small blades that can be opened or closed. Aperture settings are commonly known as "**f-stops**" Lower f-stop values (like F1.4, for example) make the diaphragm open wider, allowing more light into the lens, and vice versa.



Video on Photo composition

Usefull Photo composition tips

- Title: 9 photo composition tips (feat. Steve McCurry)
- Platform: Youtube
- Link: https://www.youtube.com/watch?v=7ZVyNjKSr0M
- Author: COOPH
- Description: COOPH presents a photography tutorial with 9 tips and tricks on photo composition, using the help of Steve McCurry's incredible photographs. Special thanks go to Steve McCurry for his time and permission to use his photographs in this video!

THANKS!

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