



Photography

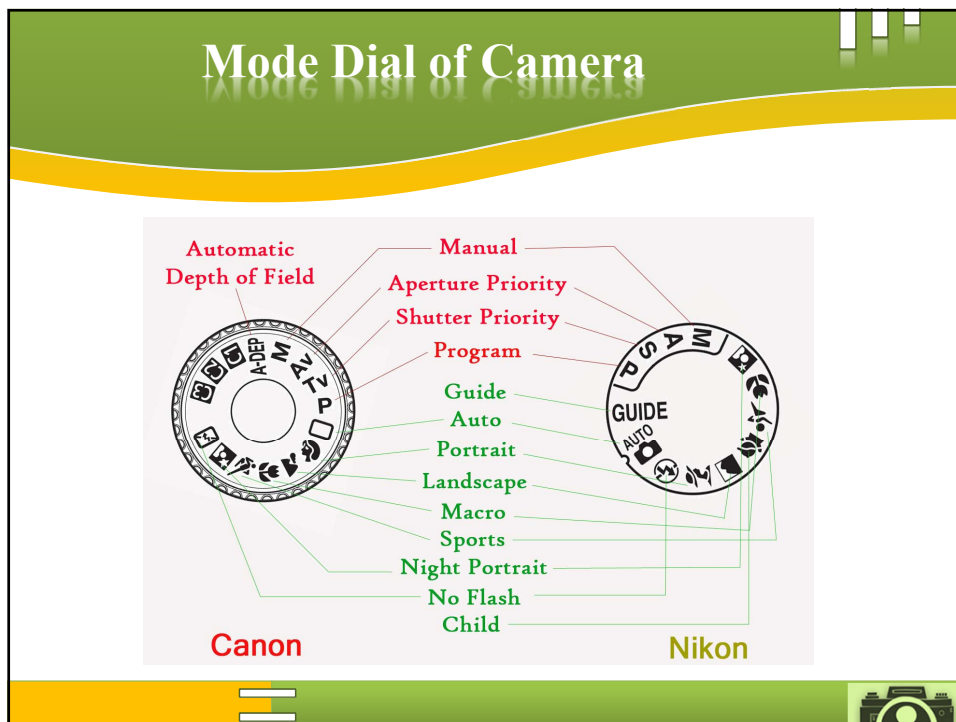
Second Lecture

Interior Design Department
TIU/Erbil

Lecturer
Musaab Sami Al-Obeidy

The slide features a green and yellow header with a logo on the left and a silhouette of a person taking a photo on the right. The text is centered and has a reflection effect. A camera icon is visible in the bottom right corner.

1



Mode Dial of Camera

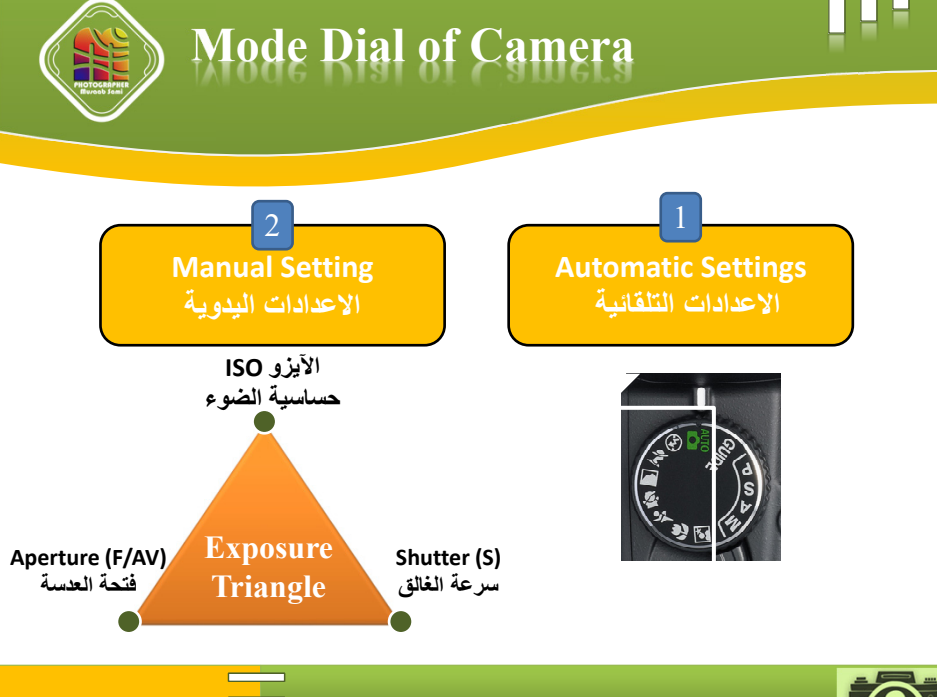
The diagram compares the mode dials of Canon and Nikon cameras. It lists the following modes:

- Automatic Depth of Field
- Manual
- Aperture Priority
- Shutter Priority
- Program
- Guide
- Auto
- Portrait
- Landscape
- Macro
- Sports
- Night Portrait
- No Flash
- Child

The diagram shows the Canon mode dial on the left and the Nikon mode dial on the right, with lines connecting the mode names to their respective positions on the dials. The labels 'Canon' and 'Nikon' are placed below their respective dials.

2

Mode Dial of Camera



The diagram illustrates the camera mode dial and the exposure triangle. The mode dial is shown with '1' pointing to the 'Automatic Settings' (الإعدادات التلقائية) and '2' pointing to the 'Manual Setting' (الإعدادات اليدوية). The exposure triangle is a triangle with vertices labeled 'Aperture (F/AV) فتحة العدسة', 'Shutter (S) سرعة الغالق', and 'ISO الأيزو حساسية الضوء'.

2 Manual Setting
الإعدادات اليدوية

1 Automatic Settings
الإعدادات التلقائية

ISO الأيزو
حساسية الضوء

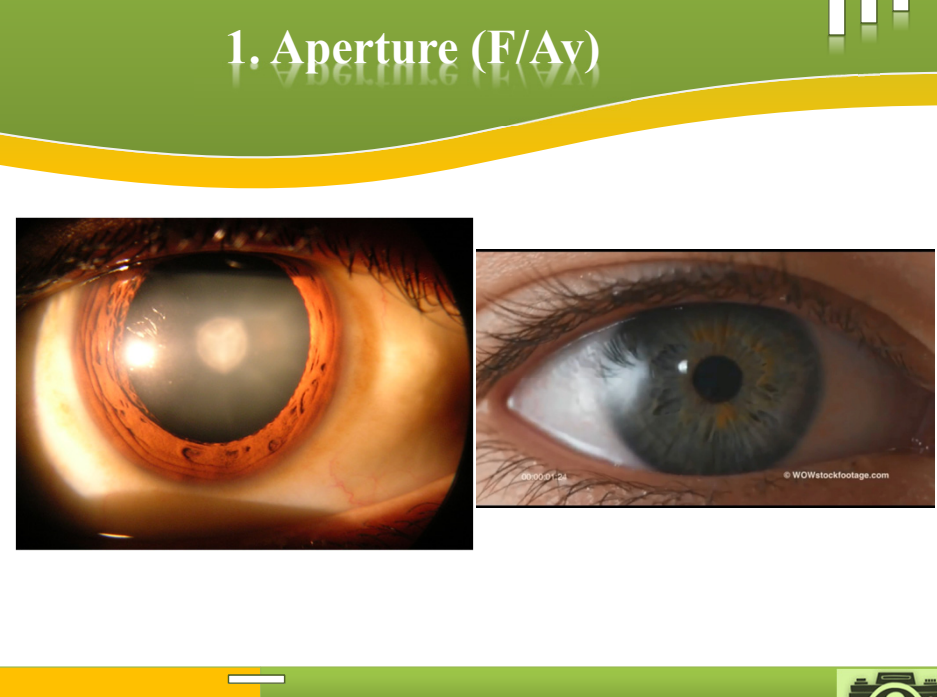
Aperture (F/AV) فتحة العدسة

Exposure Triangle

Shutter (S) سرعة الغالق

3

1. Aperture (F/Av)

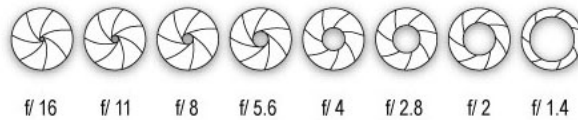


The image shows two human eyes to illustrate the concept of aperture. The left eye is shown with a large, bright pupil, representing a wide aperture (low f-number), which allows more light to enter. The right eye is shown with a smaller, more focused pupil, representing a narrow aperture (high f-number), which allows less light to enter but increases depth of field.

4

1. Aperture (F/Av)

Aperture refers to the opening of a lens's diaphragm through which light passes. It is calibrated in f/stops and is generally written as numbers such as 1.4, 2, 2.8, 4, 5.6, 8, 11 and 16. The lower f/stops give more exposure because they represent the larger apertures, while the higher f/stops give less exposure because they represent smaller apertures.



5

1. Aperture (F/Av)



6

1. Aperture (F/Δy)




F 16
Shutter 6''

F 1.4
Shutter 1/16

7

1. Aperture (F/Δy)



Meckler

8

Depth of Field and Aperture

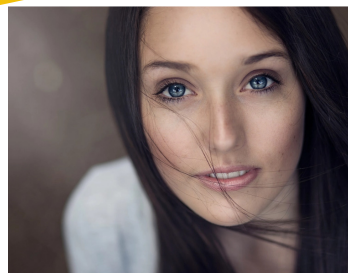
Depth of Field (DOF) is that amount of your shot that will be in focus. **Large depth of field** means that most of your image will be in focus whether it's close to your camera or far away. For example, the landscape shot above has an aperture of f/16 and the result is that both the mountain in the background and the boats in the foreground remain in focus.



9

Depth of Field and Aperture

Small (or shallow) depth of field means that only part of the image will be in focus and the rest will be fuzzy like in this portrait. You'll see in it that the subjects' eyes are in focus, but the background is blurred. Even her hair which is only a little behind her eyes is blurred. This is a very shallow depth of field and was taken with an aperture of f1.8).



10

Depth of Field and Aperture


Aperture has a big impact upon depth of field. Large aperture (remember it's a smaller number) will decrease depth of field while small aperture (larger numbers) will give you larger depth of field.

11


Depth of Field and Aperture

Some styles of photography require large depths of field (and small Apertures), guess what?

12

 **2. Shutter Speed**

Shutter speed or exposure time is the length of time when the film or digital sensor inside the camera is exposed to light, also when a camera's shutter is open when taking a photograph. The amount of light that reaches the film or image sensor is proportional to the exposure time. 1/500 of a second will let half as much light in as 1/250. Shutter speed is responsible for two things: changing the brightness of your photo and creating dramatic effects by either freezing action or blurring motion.



13

 **2. Shutter Speed**

SHUTTER SPEED



1" 1/2 1/4 1/8 1/15 1/30 1/60 1/125 1/250 1/500 1/1000 1/2000

best handheld

(full stops)


- ALLOWS IN MORE LIGHT
- LONGER EXPOSURE
- MOTION BLUR & CAMERA SHAKE
- TRIPOD NEEDED


- ALLOWS IN LESS LIGHT
- SHORTER EXPOSURE
- FREEZES ACTION
- HANDHELD EASILY

WWW.LAURIEFLICKINGER.COM



14


 **2. Shutter Speed**




FAST
Shutter Speed

MEDIUM
Shutter Speed

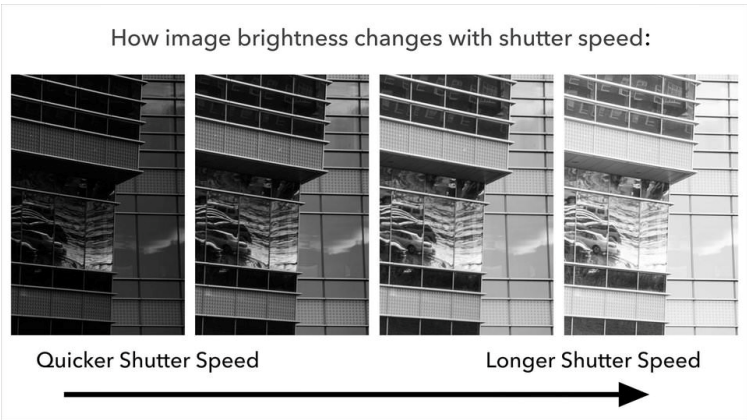
SLOW
Shutter Speed



15


 **2. Shutter Speed**

How image brightness changes with shutter speed:



Quicker Shutter Speed

Longer Shutter Speed




16

 **2. Shutter Speed**





17


 **2. Shutter Speed**

Purposes of slow shutter:

1. Car, people, or anything in motion.
2. Waterfall.
3. Getting more light at night.
4. Sparkler or fireworks

Purposes of fast shutter:

- Freezing the movement including volcano, birds, people, cars, bicycles, waterfalls, jumping, playing, actions, drops and etc.



18


 **2. Shutter Speed**




F9
S 4''
ISO 125




19


 **2. Shutter Speed**



F13
S 30''
ISO 250











20


 **3. ISO**

What is ISO?
-ISO in Traditional/Film Photography


In traditional (film) photography ISO (or ASA) was the indication of how sensitive a film was to light. It was measured in numbers (you've probably seen them on films – 100, 200, 400, 800 etc). The lower the number the lower the sensitivity of the film and the finer the grain in the shots you're taking.



50	100	200	400	800	1600	3200
						
Very bright sunlight (white sand or snow)	Bright sunlight (sunny day)	Sunlight (some shade)	Sunlight, overcast	Overcast, dusk	Night time, indoors	Night time, indoors



21


 **3. ISO**

ISO in Digital Photography


In Digital Photography ISO measures the sensitivity of the image sensor.

The same principles apply as in film photography – the lower the number the less sensitive your camera is to light and the finer the grain.

Higher numbers mean your sensor becomes more sensitive to light which allows you to use your camera in darker situations. The cost of doing so is more grain (although cameras are improving all the time and today many are able to use high ISO settings and still get very useable images).




22



3. ISO

The "normal" range of ISO is about 200 to 1600. With today's digital cameras you can sometimes go as low as 50 or as high as 204,800. The number chosen has two important qualities associated with it. First, it sets the amount of light needed for a good exposure. The lower the number, the more light required. The more light that's required, the more likely a slow shutter speed will have to be used. That means low ISOs, like 100 or 200, are most often used in bright situations (like sunlight) or when the camera is mounted on a tripod. If you don't have a lot of light, or need a fast shutter speed, you would probably raise the ISO.



23




3. ISO

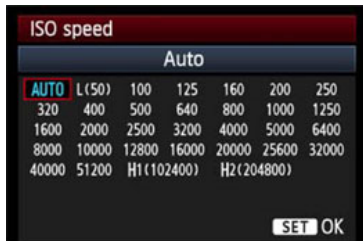


low ISO




High ISO















ISO speed							
Auto							
AUTO	L (50)	100	125	160	200	250	
320	400	500	640	800	1000	1250	
1600	2000	2500	3200	4000	5000	6400	
8000	10000	12800	16000	20000	25600	32000	
40000	51200	Hi (102400)		Hi2 (204800)			



24

 **3. ISO**

 ISO 100	 ISO 200	 ISO 800	 ISO 1600
 ISO 3200	 ISO 6400	 ISO 12800	 ISO 25600



25


 **3. ISO**


 ISO 100	 ISO 3200
--	--

Discover Amazing ISO Settings in Digital Photography




26

 **3. ISO**




ISO 100 ISO 3200


CLEAN IMAGE NOISY IMAGE



27



**Thank you For
Listening**



28