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Master of Arts in Journalism & Mass Communication (MJMC)

JMC-16(A) Advanced Photo Journalism

Block-03

Technicality of Photojournalism

Unit-1: Types and Components of Camera

Unit-2: Camera and Accessories

Unit-3: Lighting and Lightning Equipments

Unit-4: Framing and Composition

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Unit-1: Types and Components of Camera

1.0: Unit Structure

- 1.1: Learning Objectives
- 1.2: Camera and its components
 - 1.2.1: The Camera as a tool
 - 1.2.2: Accessories of camera
- 1.3: Different types of lens
- 1.4: Check your progress

1.1: Learning Objectives

After completion of this unit Learners will able to;

- To introduce students with camera and its functions
- Introduction to different types of lens
- To understand the use of accessories of cameras

1.2: Camera and its components

Photographic Cameras:

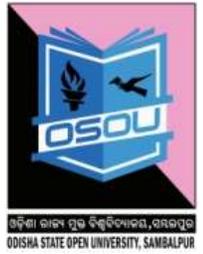
A camera is the image-forming device and photographic film is the recording medium. A camera works quite like the human eye, capturing reflected light from objects and through a camera lens and focusing those light rays into an image. Traditionally, cameras recorded the image onto film. More recently, through the development of computer chips, many cameras capture their images on a computer chip. The computer chip then allows the conversion of the image to digital data. Regardless of whether the photography is film or digital-based, the images can be made permanent and seen by an unlimited number of people. Photographers control the camera and lens to "expose" the light recording material usually film or a charge-coupled device; a complementary metal-oxide, semiconductor may also be used for the required amount of light. After processing, this produces an image.

Components of a camera:

A camera is a device that captures an image on film or digital. The major parts of the camera include:

Lens: A glass or plastic element that collects light and focuses an image for capture

Diaphragm: An aperture or opening that controls the amount of light entering the camera through the lens. The aperture can be fixed, manually adjusted or automatically controlled.



Viewfinder:

The viewfinder is the hole in the back of the camera that a photographer looks through to aim the camera. Some viewfinders use a mirror inside the camera to look "through the lens" (TTL). Other viewfinders are simply holes through the body of the camera.

Shutter:

The shutter is an opaque piece of metal or plastic inside your camera that prevents light from reaching the film or digital sensor. The shutter is opened, or released, by the shutter release button. The amount of time the shutter stays open is controlled by the shutter speed setting.

Shutter Release:

The shutter release is a button that raises a shutter inside the camera for a specified amount of time to allow light to expose the film. Essentially, it's the trigger and how you physically instruct the camera to take a picture.

Flash:

Most cameras now include a built-in flash. Some are simple light bulbs built into the front of the camera. On SLR cameras, most built-in flashes pop-up out of a protective storage area on the top of the camera.

Flash is an alternative light source in a camera often used in less light setting conditions. And external flashes are also used. External flashes can often be attached via the "hot shoe mount." On older manual cameras, there is a small connector port on the front of the camera that accepts a cable attached to a distant flash.

Body:

The light proof housing for the camera mechanism is known as its body. Nowadays the body is made of heavy plastic and has an inbuilt grip.

While the above controls/parts are pretty much standard, there are more that are less so. The first is a depth of field preview. This is a button or lever, which when manipulated, will stop down the lens to the aperture setting selected, allowing you to look through the viewfinder and actually see the depth of field. An excellent thing, with one problem: many 35mm SLRs have viewfinders that are too small and dim to see anything once you've stopped down past about $f/8$.

Another control is a self-timer, a button or switch which will release the shutter after a given interval, so that you can be in those wonderful group pix with everyone else. Usually there is a socket for a sync cord (a small double -circle), which is used to attach the camera to a strobe unit. There may be a manual shutter release, for use when batteries are well and truly gone.

Cameras that do not have auto-advance and rewind usually have a small button on the bottom of the body which must be depressed when rewinding the film. This button disengages the film advance drive mechanism. If you don't hold this down and insist in rewinding the film, you will do one of several bad things: break the rewind lever/handle, rip the film, and/or strip the gearing.

1.2.1: The Camera as a tool

A camera is a device for recording visual images which may be in the form of pictures or videos. The camera is only a tool. The cameraperson has to master photographic technique. The most important thing is to think of the best way to show the visual regarding the story to the audience. For this, the photojournalist should be able to mentally visualize the shots he wants to show and then plan accordingly.

This is achieved by taking the shots from a right and appropriate perspective. The photojournalist will think about the right angle, content of the frame and the content he wants the audience to focus on. It is always a wise thing to know as much as possible about the subjects to be photographed and think of all possible different perspectives which could be shown to the reader in order to convey the point.

Now a days, professional photographers use Digital Single-Lens Reflex Camera (DSLR). In DSLR instead of hitting the film, the light which enters hits the sensor. DSLR comes with a zoom lens which has a variable focal length in the range of 35 mm-70 mm. A good photograph can be powerful and can be an agent for change. Different journalists and photographers approach news stories differently. Some of them highlight the government's failure in a story, whereas some of them shoot to support a public cause. They capture different aspects of life of a common man to highlight their plight and suffering in order to draw the attention of authorities towards these issues. By publishing the pictures of pending projects and unfinished tasks they remind different agencies and also the public to meet their responsibility.

1.2.2: Accessories of camera

Once you have a quality DSLR camera, your next step in photography journey is to get appropriate camera accessories, which will help you to get the most out of your DSLR camera.

1. External Flash

The flash that comes with your DSLR camera is really weak. If you are shooting many pictures indoors (for example, taking pictures of kids indoor) in low light environment, you definitely need to get an external flash that can be mounted on top of your DSLR camera.



This will make a huge difference in the quality of the pictures that you take in low light conditions.

The flash mentioned below are portable and supports both hot-shoe (on top of the camera) and wireless (away from the camera) operations. They support some variation of TTL flash control. This flash has full swivel head with 180-degree angle. Groups of these flashes can be controlled together. You can also add colorgelatin filters to the flash head. These are zoom flash heads.

2. Camera Bag



A high quality DSLR camera bag is essential to protect your camera. Nowadays people prefer one bag that can be used to carry both the laptop and camera. It is recommended that you consider using a backpack style camera bag (or) messenger style camera bag. The bags mentioned here are very simplistic and extremely comfortable. These won't look like a camera bag, which is a huge advantage.

3. Super Fast SD Card



The type of SD card you use makes a huge difference in terms of your Camera's performance. Especially when you are shooting in burst mode. SanDisk is by far the best SD card brand out there in terms of reliability and performance.

Don't take risk with other brands. The last thing you want is a SD card to fail you. Both the following SanDisk SD cards are reliable and fast for your DSLR camera.

4. UV Filters



Apart from reducing UV rays, this filter is a small investment that will protect your expensive lens from accidental bumps and breaks. It will save your lens from dust, dirt and scratches. This is a must have for all your lenses. These will work on both Nikon and Canon lens.

5. Lens Hood



When you are shooting outdoors during day time, you definitely need a lens hood. This will help you to avoid the stray light, lens flaring and ghosting. This will avoid the small circle of light in your picture when there a strong light source is present

outside of your frame. Sometimes a lens hood can also help you to prevent lens scratches and dings.

6. Extra Batteries (and Charger)



When you are on a long trip, you definitely need to have couple of spare batteries in your bag. Get a spare battery and put it in your camera bag now as you'll never know when you'll need one.

7. Tripod (Regular and Mini)



One of the simplest accessories for your camera that can make a good impact is a tripod. Invest in a quality tripod that is lightweight and easy to carry around.

8. Camera Cleaning Accessories Kit



Your lens can easily attract dirt, and you should clean it frequently. These accessories

9. Extra Lens Cap



Lens cap is used to protect from wind and dust. Lens cap is something that might get lost easily, especially when you are travelling.

1.3: Different types of lens

Standard lenses-Standard lenses have a mid-range focal length, usually between 35mm and 85mm. These lenses offer a fairly accurate representation of what the human eye sees, both in terms of visual angle and perspective. As a result, images are perceived as more natural than those taken with other types of camera lenses.

Also known as “normal lenses,” their human-like viewpoint is especially valuable in documentary projects such as street, portrait and travel photography. Beyond these genres, this lens is considered a standard lens that every professional photographer



Wide angle lenses-Wide angle lenses are those with a short focal length, commonly ranging from 14 to 35mm. The broader field of view allows you to capture more of the scene in a single exposure. Because of this, wide angle lenses are particularly popular in architecture and landscape photography.

Another one of the key features of these types of camera lenses is their ability to create a large depth of field. This allows the photographer to capture shots where most of the scene is razor sharp. On the downside, the shorter the focal length is, the more distortion you'll see in your images. While you can use free photo editing software to correct this issue, it's recommended to avoid placing elements near the frame to minimize the damage.



Fish eye lenses-Fish eye lenses are ultra wide angle lenses with a focal length between 4mm to 14mm. They're most commonly used in abstract photography, as their unique mapping gives the image a convex appearance that distorts straight lines. The lowest focal lengths can result in circular images that provide a 180° view.

As you might've guessed, their name comes from their similarity to the eye of a fish. You can see in the frontal element of the lens that it bows forwards to offer a panoramic view. While the singularity of this type of camera lens makes them unsuitable for most projects, they are a wonderful tool to bring your creative photography ideas to life.



Macro lenses-Macro lenses have a unique internal structure that allows them to capture close ups with accurate detail, sharpness, and contrast. The purpose of this type of lens is to display subjects at life size (1:1) or larger. They're primarily used to capture beautiful nature photos, but are also significantly popular in fields such as product and fine art photography.

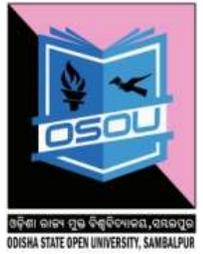
The focal length of macro lenses usually varies between 35mm and 200mm. However, many prefer telephoto lengths as being far from the subject makes it easier to illuminate the scene. Regardless of the distance the photographer is from their subject, macro lenses do not perform well in far distances. In other words, you won't be able to get a sharp focus in a broad frame.



Tilt-shift lenses-Tilt-shift lenses can be tilted and shifted to manipulate the vanishing points of the scene. This is achieved by modifying the position of the optics in relation to the camera sensor. They're used to alter perspectives and reduce lens distortion, as well as to focus selectively.

This type of lens is not commonly used by the regular public, but rather in specialized photography careers such as architecture photography and fine art photography.





1.4: Check Your Progress

1. What are the different types of cameras?

2. Explain five essential accessories used with camera.

3. Name three lenses and describe their usage.

UNIT-2: Camera and Accessories

2.0: Unit Structure

- 2.1: Learning Objectives
- 2.2: Technicalities of Photography
- 2.2: Exposure Triangle
- 2.3: ISO, Aperture and Shutter Speed
- 2.4: Manual and Auto Mode
- 2.5: Check your progress

2.1: Learning Objectives

After completion of this unit, Learners will be able to;

- Understand the manual and auto mode of photography
- Know the ISO, Shutter Speed and Aperture
- Use the exposure setting

2.2: Technicalities of Photography

Good camerawork focuses on the relevant parts of the story i.e. visual parts which are important for storytelling and leaves the rest. The relevant visual parts are photographed in a manner which develops an emotional connect with the audience. Such a photograph with the emotional appeal is liked by the audience and they remember it for long. While doing his camerawork the photojournalist needs to be sensitive towards the feelings of other human beings. Right specifications of focal length, exposure and ISO can bring good results even with an old camera. The specifications depend on whether the photography is outdoor or indoor. The time of the day also affects the quality of the picture.

Source of light and the temperature of artificial lights also affect the final picture

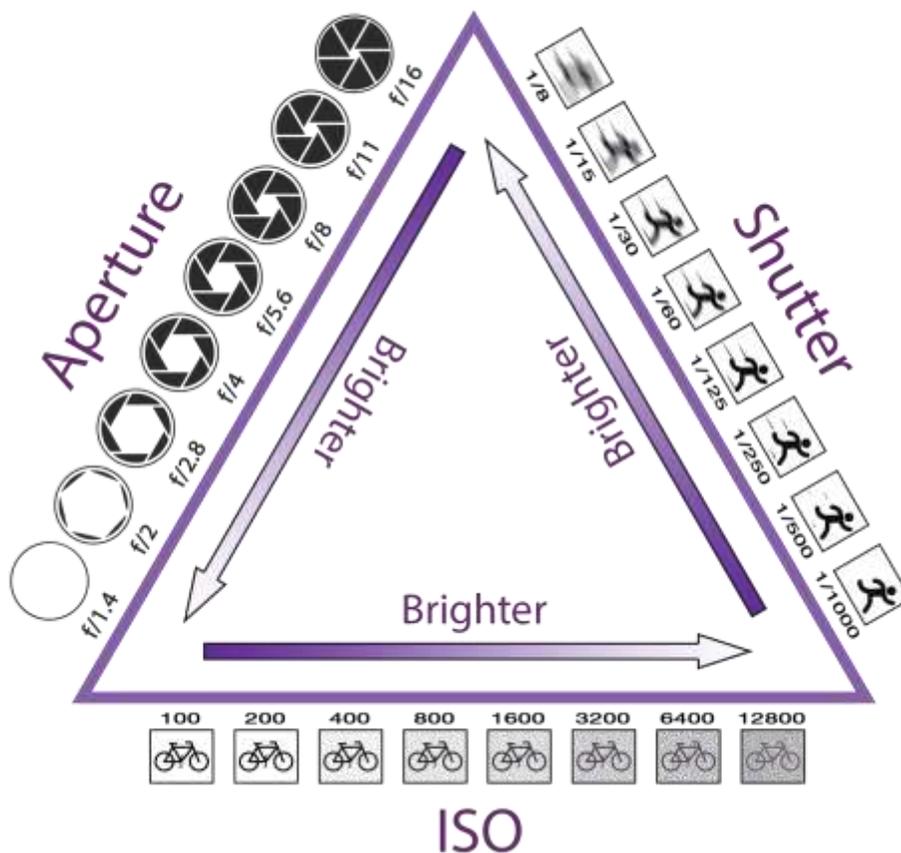
A good understanding of these terms is necessary to bring the desired results. The exposure or exposure value is the amount of light received by the camera. If more light goes inside the camera the image becomes overexposed and if the amount of light is less it is underexposed. Inappropriate levels of exposure are seen as noise and affect the message.

Many newsrooms reject these images as they are not fit for publication. Three values are considered important when looking at the amount of light entering a camera. a) Shutter Speed, b) Aperture and c) Sensitivity. Shutter speed refers to the time the sensor is exposed to the light and is measured in fraction of seconds. A shutter speed of 1/30 exposes the sensor to light for 1/ 30th of a second.

For most cameras successive shutter speed roughly halves the exposure time (i.e. 1/30s, 1/60s, 1/120s.) Faster shutter speed is required to capture fast motion like a cycling race or 100 meter sprint.

2.3: Exposure Triangle

The exposure triangle is a common way of connecting the three variables that determine the exposure of a photograph: aperture, shutter speed, and ISO. In the automatic mode the camera setting allows the three aspects on its own. Whereas in the manual mode one must balance all three of these to achieve a desired result, an adjustment of one requires adjustments of at least one of the others. Some digital cameras have exposure control mode which automatically control the shutter speed as well as the aperture.



2.4: Aperture, ISO & Shutter Speed

Aperture:

It is often referred to as the 'pupil of an eye'. As the light decreases the pupil opens wider, whereas in the adequate light the pupil lets smaller and shrinks when the light is bright. Therefore, the main function of aperture is to control the amount of light reaching the camera's sensor. A diameter of an aperture is measured in f-stops. A lower f stop number opens the aperture and admits more light in. The higher the f-stop, less light enters inside.

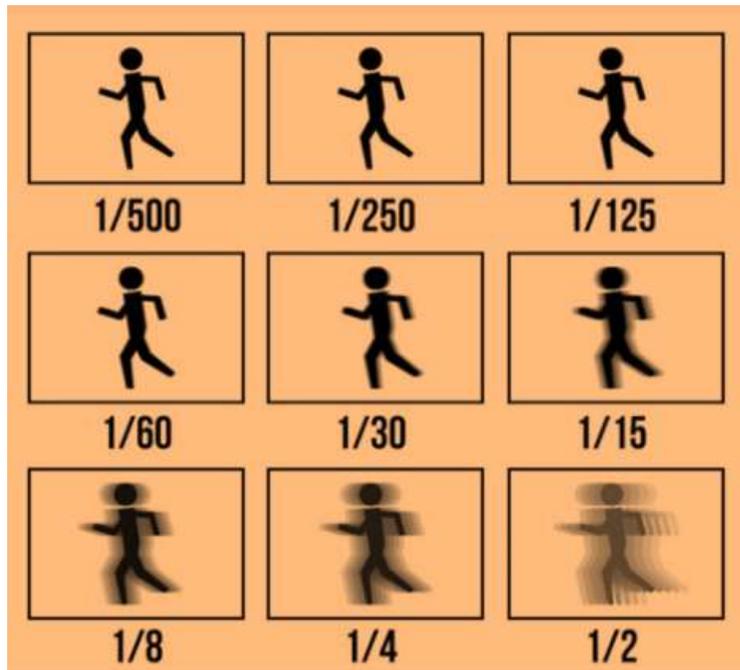
				
f/1.4	f/2.8	f/5.6	f/11	f/22
Very Large Aperture	Large Aperture	Medium Aperture	Small Aperture	Very Small Aperture
Very Small Depth of Field	Small Depth of Field	Medium Depth of Field	Large Depth of Field	Very Large Depth of Field
Almost Nothing In Focus	Little In Focus	Some In Focus	Much In Focus	Almost All In Focus
				
Brightest	Bright	Medium	Dark	Darkest

Aperture settings also affect depth of field (DOF). The Depth-of-field indicates how much of a photo is in focus when the camera is focused on the main subject. Deep depth of field means that most of the picture is in focus from front to back. Similarly less depth of field means that a subject is in focus but objects in front and behind it appear out of focus.

Shutter Speed:

The shutter speed is a cover over the film or CCD that controls the length of time that the light reaches the film. Shutter speed is responsible for two particular things: changing the brightness of your photo, and creating dramatic effects by either freezing action or blurring motion. A fast shutter will freeze the subject and slow shutter speed will make it look blurred as the subject moves.

There are two techniques for slow shutter photos. The first is following the subject as it moves - a technique known as panning. Another method is to keep the camera at a fixed point and press the shutter button using a slow shutter speed.



Screenshot

For faster shutter speed during the day, in case you want to freeze a motion, the shutter speed needs to be more than the vehicle.

ISO:

ISO refers to the sensitivity of the camera. A high ISO means there's more sensitivity, while a low ISO means the sensor becomes less sensitive to the amount of light.

Auto ISO creates a balanced exposure depending on the aperture, shutter and camera settings. If you set the ISO too high, you might get a very bright image that has lots of visible dots.

Sometimes when photographers shoot with less light, they increase the ISO. However, this results in increased noise, and subsequently, less detail. The lower the film sensitivity to light, the less "grainy" the image will be. So the lower the number, the cleaner the image will be (less "grain/noise").

ISO 100-200



Daylight

ISO 200-400



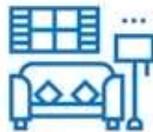
Shade/
Indoors

ISO 400-800



Flash
Indoors

ISO 800-1600



Darker
Indoors

ISO 1600-3200



Indoors
at Night

ISO 3200+



Extra Low
Light

Source- <https://expertphotography.com/>

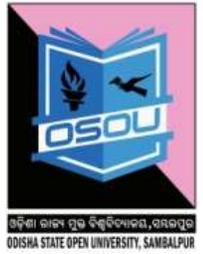
2.5: Manual and Auto Mode

When you buy a digital camera, it will come with a selection of camera modes. These are pre-programmed settings that allow you to choose the optimum shutter speed and aperture value for the photograph you want to take.

They are useful when you are starting out, but also for the experienced photographer who needs to capture a shot fast.

In the world of cameras, manual means custom shooting. It means you fully control the scene from shutter speed, ISO, and aperture. Shooting on manual mode allows you to do more than auto will ever allow you.

Learning to shoot on manual mode gives you full control over your photography. However, it's not something you will learn or perfect overnight.



Manual Mode

In Manual mode one can control

Exposure: Controlled by what's known as the exposure triangle: aperture, shutter speed, and the ISO. However, the three do more than just that.

Aperture: Also controls a depth of field (think of images where the background is blurred allowing the focal point to be the main subject.)

Shutter speed: This can control how you capture action- either in motion or still. It's helpful to know how to work with your shutter speed if you want to capture anything in motion, like water or sports.

ISO: If you want to brighten your image, increase your ISO, but know that it also enhances the visible grain in your picture.

Auto Mode

Automatic Exposure is when the camera chooses the optimum shutter speed, aperture, ISO and flash settings for your shot.

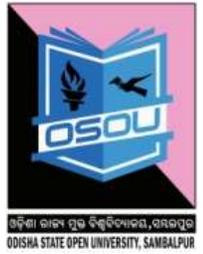
All you need to do is point and shoot. This can be good if you have no idea of what settings to choose and also when you need to shoot quickly.

The shot here is correctly exposed as the day is well lit, though auto-exposure may struggle in situations where the light is uneven, and it tends to trigger the flash even when it's not necessary.

Advanced Camera Modes

On most DSLR cameras, there will also be the letter modes – M (Manual), AV (Aperture-Priority), TV or S (Shutter-Priority) and P (Programmed Auto).

- Manual mode requires the photographer to set every single setting
- Aperture-Priority allows the photographer to set the aperture value and the camera automatically sets the correct shutter speed
- TV lets the photographer choose the shutter speed first (for example when shooting sports), and the camera automatically sets the correct aperture
- P-Program mode is similar to Auto mode in that the shutter and aperture settings are determined by the camera, but the photographer can adjust other settings manually



2.6: Check Your Progress

1. What is an Exposure triangle?

2. What are the uses of ISO and Shutter Speed?

3. What is the difference between Manual and the Auto Mode?



Unit-3: Lighting and Lightning Equipments

3.0: Unit Structure

- 3.1: Learning Objectives
- 3.2: Lighting in Photography
- 3.3: Types of Lighting
- 3.4: Lighting Equipments
- 3.5: Lighting Assesories
- 3.5: Check Your Progress

3.1: Learning Objectives

After learning of this unit, learners will be able to;

- Know the importance of lighting
- Use the Side light and back light
- Use of lighting equipment

3.2: Lighting in Photography

Light is an important component in photography. It not only creates a photograph but is also responsible for brightness, contrast and texture of the picture. The use of light also depends on the eye of a photographer. Some prefer underexposed photographs whereas some prefer over exposed. The film or the sensors of the cameras are the two variables that deal with the amount of light, whereas it's the shutter speed and aperture that regulate the amount of light reaching the film or the sensor.

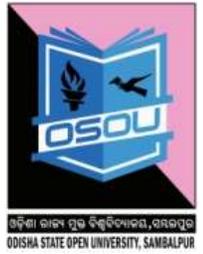
Source of light

There are mostly two sources of light- natural and artificial.

When we talk about natural light, it means existing light or the light emitted from a natural source such as the sun, moon, stars or lightning. Natural light also depends on the time of the day and keeps changing according to the weather conditions.

Artificial light means light derived from any source which is not natural. The examples of artificial light are candles, studio light, tungsten light, internal or external flash light.

For effective lighting, the morning and late afternoon are best times to shoot. The lower angle of the sun brings golden light. One can find longer shadows in early morning and evening and can play with the light as compared to the mid-day when sun is harsh and shadows formed are too small.



3.3: Types of lighting

One of the hardest things to get right in a photograph is the lighting. Too much light, too little light, or a combination of both can ruin an otherwise perfect photo. But, luckily this problem can be solved if you understand the types of lighting, how they affect your camera and what you can do to use these effects to your full advantage.

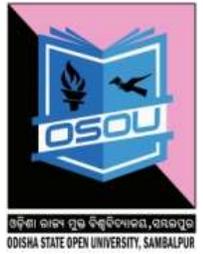
1. **Backlighting**

Backlighting is just as it sounds: light that comes from behind your subject. This can make a beautiful photo, or turn a beautiful photo into a disaster. Backlighting is what turns a palm tree into a silhouette against the sunset. In this case, that is a good thing that adds to the photograph. But, the same thing can happen if you want to take a photograph of a person who has a strong backlight behind them, such as the sun, sky, or bright lights. The camera reads the brightness behind the main subject and sets its internal meter to expose properly for the extra light. This underexposes your subject and will usually turn them into a silhouette. You can avoid this by using a fill-flash.

A fill-flash will “fill” in the needed light, chasing away the shadows from your subject caused from the bright light behind

2. **Side Lighting**

Side lighting can have a very drastic effect on your photos, also. But, unlike backlighting, its brightness comes from the right or left of your subject. This tends to cast one side in total darkness, while putting the other in the spot light. This is a wonderful way to get a mysterious, dramatic portrait photo. Pose your subject in front of a window, with one of their shoulders close to the window. Your camera will expose properly for the bright side and will usually cast the other side of the face in complete darkness. If, on the other hand, you want a natural portrait you can use something to reflect light onto the darkened side of the face. A white poster board or other light reflecting surface can bounce enough light back onto your subject to soften the effect of side lighting. Side lighting is wonderful for showing texture and adding depth to a photo.



3. **Diffused Lighting**

Sometimes lighting from any direction is just too harsh. This is when you want to soften the incoming light, to take away some of the contrast for a more pleasing photograph. Bright sunlight at midday is the worst kind of light for photography. The light colors are washed out and the contrasting shadows are too dark. To avoid this, wait for the sun to go behind a cloud or if your subject is moveable, put them in the shade of a tree or building and take the photo there. The light will be much more natural here and will result in a better photo. If it is not possible to move your subject, and there is not a cloud in sight, you can sometimes make your own shade with an umbrella or some similar object. Or, come back in the morning or evening when the sun is lower the sky.

4. **Artificial Lighting**

Artificial lighting comes in all shapes and sizes. From a built in flash on your camera to expensive lights in the studio, they all have their strengths and weaknesses. On camera flashes are simple and easy to use, but sometimes cause the awful red eye so common in snapshots. The farther the flash is away from the lens, the less likely this is to happen. Another problem with on camera flash is the harsh light they cast onto the subject. If you have an off camera flash, you can bounce the light for a softer effect. One last thing to remember about artificial light, unless you are using black and white film, regular indoor lights will give your photos a yellow cast.

5. **Flat Lighting**

The first key (or primary/main) common lighting pattern that you should be familiar with is flat lighting. Flat lighting faces directly into the subject from the angle of the lens. Flat lighting is the least dramatic lighting pattern because it casts the least amount of shadows on the subject's face.

6. Butterfly Lighting

Butterfly Lighting (or Paramount Lighting) comes directly in front and above the subject's face. This creates shadows that are directly below the subject's facial features. The most notable shadow, and where this lighting pattern gets its name, is a butterfly shaped shadow just under the nose. It is also called "*ParamountLighting*" because this lighting pattern was used heavily in the Paramount movie studio of old Hollywood. The only difference between flat lighting and butterfly lighting is the height and angle of the Key Light. This creates the same flattering features as flat lighting but includes shadows underneath the nose and chin.



Title- Types of Lighting: Butterfly Lighting

Attribution- Darlene Hildebrandt

Link-<https://digital-photography-school.com/6-portrait-lighting-patterns-every-photographer-should-know/>

7. Loop Lighting

Loop lighting is probably one of the most common key lighting patterns. We see that it falls right in the middle between flattering flat light to dramatic split light. Loop Light is such a condition, where most of the face is still in light but you still have enough shadows to bring in some definition. It brings out a three dimensional effect of the subject.



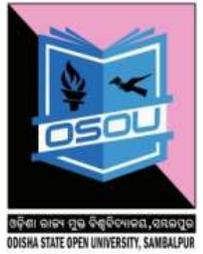
Title- Types of Lighting: Loop Lighting

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Link-<https://digital-photography-school.com/6-portrait-lighting-patterns-every-photographer-should-know/>

8. Split lighting:

Split lighting simply “splits” the subject’s face, lighting half of your subject’s face while leaving the other half in shadow. Because of the angle of light, there is no Rembrandt triangle, only shadow. When the key light is set up 90° directly, to the right or left side of the subject’s face. The line separating light and shadow will be down the middle of the nose



and chin. This creates the most dramatic light and the least flattering light to use.

9. **Half-light:**

Half-light is a condition of portrait photography when the subject is *half illuminated* and *half in shadow*. The light is hold in such a manner that only half of the subject is lighted. This creates a very magical effect.

10. **Fill Light:**

As per the name it is used *to fill a gap of light and darkness*. If there is a contrast of dark and over exposed portions on the subject, then a soft light can be used to supply a little amount of exposure on the subject. It thus fills the gap and subject looks normal to the eye. The amount of fill light can be used as per the resolution of recording medium. The most common source of natural omnidirectional fill light is the sunlight. It is mostly used while shooting outdoor. A fill light is used against the axis of the direct light. Hence it cuts off any hard shadows created by the direct light upon the subject. The positioning of the fill affects the overall appearance of the lighting pattern. When a centred fill strategy is used the ratio is created by overlapping the key light over the foundation of fill. A key source of equal incident intensity to the fill, overlapping the even fill, will create a 2:1 reflected ratio (1 key + 1 fill over 1 Fill) = 2:1.

11. **Ambient Lighting:**

Ambient light means the light that is already present in a scene, before any additional lighting is added. It usually refers to natural light, either outdoors or coming through windows etc. It can also mean artificial lights such as normal room lights. Ambient light can be the photographer's friend and/or enemy. Clearly ambient light is important in photography and video work, as most shots rely largely or wholly on ambient lighting. Unfortunately ambient light can be a real nuisance if it conflicts with what



the photographer wants to achieve. For example, ambient light may be the wrong colour temperature, intensity or direction for the desired effect. In this case the photographer may choose to block out the ambient light completely and replace it with artificial light. Of course this isn't always practical and sometime compromises must be made. On the other hand, many of history's greatest photographs and film shots have relied on interesting ambient light. Unusual lighting can turn an otherwise ordinary shot into something very powerful.

12. **Motivated Lighting:**

The light in a scene which appears to have a source such as a window, a lamp, a fireplace, so on. In some cases the light will come from a source visible in the scene and in some cases, it will only appear to come from a source that is visible in the scene.

3.4: Lighting equipment

Incandescent, fluorescent, LED and **flash** are the main kinds of artificial light sources used in photography. These lighting setups range from studio AC-powered equipment to portable equipment that runs on AA batteries. They all output different ranges of light power.

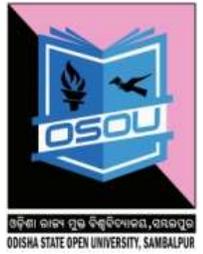
1. Continuous light/Hotlight

They serve the same lighting functions as strobes, but they don't flash. Instead, they are high-powered lamps that can usually be fitted with modifiers in the same way as strobes. While mostly associated with video, continuous lights still have their place in stills photography. There are a lot of LED lights coming onto the market at the moment, and many of them are viable options.

The hotlight moniker comes from the fact that they tend to get very hot. Be careful with modifiers that sit close to the bulb as they present a fire hazard. This does not apply to LED lights.

2. Flashgun/speedlight

They are any small light with a hot shoe mount for placing on top of your camera. They are highly portable, and some come with reasonably high power outputs.



Although their versatility is ultimately limited to their size and power output, they are still an extremely useful tool for any photographer interested in off-camera lighting.

3. Speedlight Lighting Kit for Photography

Portable Speedlight Lighting Kits are a kind of external flashes that can be used to disperse the light with umbrellas and softboxes. They are faster than normal flashes and can be versatile. They are one of the best product photography lighting equipment to shoot still and product photos.

Speedlights are very lightweight and portable. Thereby it makes a good alternative for setting up a quick and ongoing studio.

4. Reflector Kit

Versatility has not seen more in anything as compared to reflector kit. They are compact, versatile, and even handier for both indoor and outdoor shoot.

At the time when positioning correctly in the studio, a reflector kit can easily turn one light into both the key light and, by reflecting the light behind the subject, the hair light as well.

3.5: Light Assesories

Just getting the appropriate lights while shooting is not enough, you may need some more materials to get the perfect lighting mood and condition. These are called light accessories such as barn doors, gels, cookie, diffuser, flag, umbrella, scrim, silk, reflector, black wrap.

Barn doors:

Based on the terminology of video and film, barn doors are not utilized for corral farm animals. Consider them like leaves - 2 to 4 of such, as a rule. Now place the entryways before a light source. They would be seen everywhere in lights utilized for TV, film, or Broadway creations. They would be utilized to shape the light and keep it in a place based on your requirement and mask the other where it is not needed. The

specialty is that the equipment is very handy and one won't feel tired on utilizing it. Know that the lights may become hot upon use – so in case if there is a requirement for adjusting the barn doors, utilize gloves before using it. On a creation, people generally forgot to wear gloves and simply move the barn doors - that is an awful thought. It controls the quantum of light turning out.

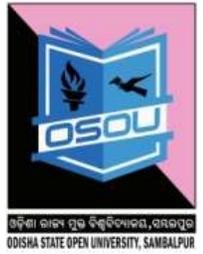
Gels:



Gels are related with many names - so it may be referred as color filter, color gel, lighting gel or simply gel. Regardless of the name, each element performs the same task. Gel is a material that is transparent with a color. Gels are broadly utilized on photography shoots, photography shoots, theater productions, videography shoots and, obviously, in film production. These gels can also be utilized for correcting the color or adding colour to a scene for a dramatic impact. Thin sheets of polyester or polycarbonate are used to make these gels. These can be placed straightforwardly before the lights. Gels won't keep going forever; they blur or the greater part of them melts in view of the extreme warmth from the lights. It is used for colour balancing and bringing some dramatic effect.

Cookie:

Cookie is basically a shape that is cut out and is put before a hard light. By hard light we mean a light which is small generally, and that can be focused and utilized to deliver shadows and highlights. So we can use these cut out shapes maybe abstract or geometrical place in front of the light to get such patterns in the background or foreground.



Diffuser:

Similar to the gel, a diffuser is a translucent bit of material placed before a light for softening shadows and highlights. Likewise a diffuser is utilized to diminish contrast and to enhance the angle of beam. By contrast here we mean the differentiation among one intensity and another or among the lightest and darkest components of a scene. Diffused light means a light that comes via a diffuser. As compared to the hard uncovered light, the diffused light is more capable of creating softer shadows. It is utilized to lessen contrast.

Flag:

Flag is called by different names by photographer such as siders, cutters or gobos. Basically its panel is opaque in nature due to which it is utilized to block light and shadow the subject, camera lens or the background. Likewise it can be utilized to hide lights within a scene.

Reflector:

Reflectors are basically of two types. The former type is utilized for lightning the indoors. This reflector is bowl-shaped and is available in different sizes. Once in a while any hard white surfaced materials like thermocols are additionally utilized as reflectors. You can use this type of reflector to shape and intensify the light's beam. For outdoor use the second type reflector is used. These reflectors are basically used to redirect light. They are flat and coloured in white, silver or gold. It is used to redirect and intensify the light beam.



Title-Hand Reflector

Attribution-Katie Chan

Link-https://commons.wikimedia.org/wiki/File:ExPro_42_inches_Photographic_Light_Reflector.JPG



Title-Light Meter

Attribution-Wolfgang Lonien

Source-7dcp2185798-flash-meter

Link-https://commons.wikimedia.org/wiki/File:Sekonic_L-308S_Flashmate_digital_light_meter.jpg

Another very important and useful device that is necessary for good and proper light intensity and that is **light meter** or **exposure meter**. This small device is used to

detect the amount of light falling on the subject and adjust the light condition accordingly.

Camera Support

The camera supports are the equipments used to balance and operate the camera other than handheld. They help in smooth operation and creating camera motion effects. Some of these are known as tripods, trolleys, dolly, rigs, jibs and stabilizers etc.

Tripod:

A tripod is a portable three-legged frame, used as a platform for supporting the weight and maintaining the stability of camera. Many a times cameraman uses heavy lenses which makes smooth camera operation difficult in handheld condition.



Title-Tripod

Link-<https://pixabay.com/en/tripod-camera-stand-photography-390902/>

The tripod serves the purpose. A tripod provides stability against downward forces and horizontal forces and movements about horizontal axes. It also gives proper level and balance to the camera.

Rigs / Stabilizers

A rig is a modular piece of equipment used to extend the usefulness of a camera, whether through accommodating additional shooting styles, allowing for additional

gear to be mounted safely, or for smoothing out the motion of the shot. To simplify rig is an equipment which not only gives support to camera but also could include additional gears such as microphone and viewfinder monitor. Most of the rigs are attached to body such as steadicam or shoulder rigs as it stabilizes the camera movement while handheld.

Monopods



Screenshot

Panning speed and flexibility are two issues that the tripod-mounted camera occasionally suffers with. After all, the tripod is intended to be stationary. Camera shake, on the other hand, is your enemy when shooting with long telephoto lenses. The monopod provides additional stabilisation for long-lens photographers while allowing movement to capture the action of sporting events or animals. Cameras can be mounted directly on the monopod or coupled to a tripod head.

Sandbag / Beanbag



Screenshot

Sometimes all you need to stabilise your gear is something pliable to rest your camera and lens on. There is no need for mechanical devices. Here's where beanbags or sandbags come in handy. One bag even features a 14"-20 camera mount on the top to keep your equipment secure. Some bags are filled, but can be emptied to save space in your pack or camera bag and filled with whatever is handy when needed.

Many Bean Bags ship empty and can be filled with rice, sand, buckwheat, sweets, or whatever else is available in the field.

Camera Stands / Extension Poles



Screenshot

Want to get your camera well up above the throng or that pesky wall? There are a few camera supports that might assist you in accomplishing this. It can lift your camera to a height of 27'. Extension poles, which are shorter but more portable, outperform selfie sticks in terms of reach.

Chest Mounts / Shoulder Rigs



Screenshot

When you're on the road and don't have room for a tripod, this is the solution. A chest mount could be just what you're looking for. One type has a vest that you can wear.

The functions are similar, but the applications are not. One is neck-strap based, while the other is not. The shoulder rig, which was once prevalent in the video sector, now proved effective in still photography. It will help to stabilise your camera and eliminate image shake when shooting with a long lens.

Window Mounts



Screenshot

In bad weather, you might not want to get out of your car to take a shot. So, keep hidden and use a window mount to mount your camera. It may also be used as a low mount and has rubber pads to preserve the finish of your vehicle. Furthermore, if you are concerned about overstressing the glass of your car window, it is designed to straddle your car door when the window is rolled down or to attach to your window.

Clamps



Screenshot

On the same lines as window supports, there seem to be a variety of clamps meant to clamp onto, well, almost everything you can imagine a clamp clamping into. Clamps

are available with various jaw sizes and load capabilities. To boost adaptability, some include articulating heads or movable arms.

Suction Cup Mounts



Screenshot

Suction cup mounts have recently attracted considerable attention as a result of the action-camera revolution, but there are some that are specifically designed to secure bigger cameras. It can support 13 pounds of video equipment on the hood of a car, the hull of a sailboat, or the deck of a surfboard. Suction-cup mounting options abound for smaller point-and-shoot cameras and action cameras.

Tabletop Tripods and Short Supports



Screenshot

Not even to reject the tripod entirely, there are various tiny tripods that may easily fit in your pocket and provide the steadiness you require when on the go. Some variants

are adaptable, allowing for more compact storage and varied setup with the Ball Head.

There are also certain supports that are specifically built for mounting your gear near to the ground. Likewise, some are intended for both vertical and horizontal shooting.

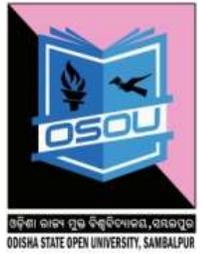
Multi-Use Supports



Screenshot

This is so one-of-a-kind that it does not fit into any of the categories listed above. The support combines a monopod-stabilizer, a 3-point shooter, a tabletop tripod, and a monopod for tiny cameras and action cameras.

3.6: Check Your Progress



1. What are different sources of lights?

2. What are different directions of light?

3. What is use of back light?

4. Discuss different types of support system for handling of Camera?



Unit-4: Framing and Composition

4.0: Unit Structure

- 4.1: Learning Objectives
- 4.2: Elements of Photography
- 4.3: Aesthetic Values
- 4.4: Framing Composition
- 4.5: Check Your Progress

4.1: Learning Objectives

After learning of this unit students will be able to;

- Understand the rules of composition
- Learn how to frame a photograph

4.2: Elements of Photography

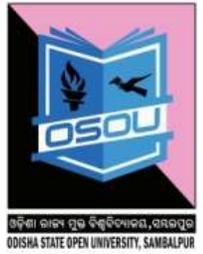
Photography gained the interest of many scientists and artists from its inception. Scientists have used photography to record and study movements, such as Eadweard Muybridge's study of human and animal locomotion in 1887. Artists are equally interested by these aspects but also try to explore avenues other than the photo-mechanical representation of reality, such as the pictorialist movement.

Military, police and security forces use photography for surveillance, recognition and data storage. Photography is used to preserve memories of favorites and as a source of entertainment.

During the twentieth century, both fine art photography and documentary photography became accepted by the English-speaking art world and the gallery system. In the United States, a handful of photographers, including Alfred Stieglitz, Edward Steichen, John Szarkowski, and Edward Weston, spent their lives advocating for photography as a fine art.

4.3: Aesthetic Values

At first, fine art photographers tried to imitate painting styles. This movement is called Pictorialism, often using soft focus for a dreamy, 'romantic' look. In reaction to that, Weston, Ansel Adams, and others formed the f/64 Group to advocate 'straight photography', the photograph as a sharply focused thing in itself and not an imitation of something else. The aesthetics of photography is a matter that continues to be discussed regularly, especially in artistic circles.



Many artists argued that photography was the mechanical reproduction of an image. If photography is authentically art, then photography in the context of art would need redefinition, such as determining what component of a photograph makes it beautiful to the viewer. The controversy began with the earliest images "written with light"; NicéphoreNiépce, Louis Daguerre, and others among the very earliest photographers were met with acclaim, but some questioned if their work met the definitions and purposes of art.

4.4: Composition/ Framing

Just like we compose our table, cupboard or even small things, a photograph becomes more appealing when you compose it better. By composition we mean 'what to keep and what to leave in the frame'. The placement of the subject or subjects within the picture frame is called composition.

Composition has a special meaning when it has to convey news to the public as is the case in photojournalism. It is the placement of the subject being photographed. Composition also deals with making the picture look more appealing to the eye.

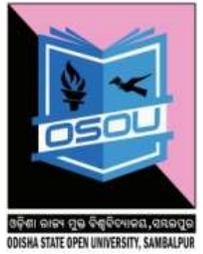
Action photographs of war or sports show a kind of energy that should make the viewer feel that he is in the midst of those actions. Composition also demands balance, that is to say a photograph must be taken in such a manner that it should not seem to make our eye wander to a corner. The various subjects should be so organised that the picture has a pleasing effect.

However, photojournalists are always short of time to always get a well composed picture. But with practice they master the art even in the small amount of time. In case of breaking news, it is quite difficult to plan a shot like this. In case of a portrait, feature or a photo story they have the time and can take photos with high aesthetic values and composition.

There are some basic rules of framing

1. The rule of thirds

It states that elements in a frame must be so placed that they roughly fall on the intersection of the lines that divide the frame in three rows and three columns. This is no hard and fast rule, yet it helps in leaving a positive impact on the viewer.

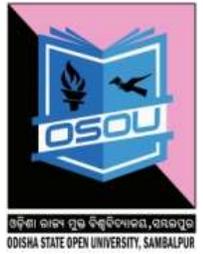


According to this rule the key subject, action or prop in the frame should be placed at the intersections of the imaginary lines that divide the frame into thirds. Placing the subject in the centre of a frame is seen as bad composition.

2. **Leading line:** It refers to a technique of composition where the viewer of your photos attention is drawn to lines that lead to the main subject of the image. A leading line paves an easy path for the eye to follow through different elements of a photo. It is an imaginary line that created in a photograph that helps an eye to travel and leads to the subject. The line could be formed with anything present in the subject.
3. **Geometry:** It means lines, circles, spheres, triangles present in the frame. In photography, geometric imagery describes visual emphasis on bold shapes, lines and patterns. Common examples of geometric photography are often encountered in architectural imagery. Geometric subjects can feature in genres like minimalism, abstraction and fashion photography too.
4. **Pattern** photography utilizes elements that are repeated. The repetition of lines, shapes, tones or color can create interesting images. There are photographers who use the pattern as the main subject of an image while others use it to enhance the overall composition and look of the photograph.
5. **Texture** refers to the visual quality of the surface of an object, revealed through variances in shape, tone and color depth. Capturing high levels of detail is extremely important when attempting to capture lifelike textures making exposure choices critical.
6. **Frame within a frame:** Means composing a photograph within a frame like object present in the frame. It could be a subject in the window, a subject in the corridor, an arch or anything. The idea of frame within the frame photography is to give depth to a photograph.

More values:

Simplicity-Be sure that only the things you want the viewer to see appear in the picture. If there are numerous objects cluttering up the background, your message will be lost. If you can't find an angle or framing to isolate your subject, consider using depth of field control to keep the background out of focus.



Contrast-A light subject will have more impact if placed against a dark background and vice versa. Contrasting colors may be used for emphasis, but can become distracting if not considered carefully.

Balance-Generally, asymmetric or informal balance is considered more pleasing in a photograph than symmetric formal balance. In other words, placing the main subject off-center and balancing the "weight" with other objects smaller or lower impact will be more effective than placing the subject in the center.

Framing-A "frame" in a photograph is something in the foreground that leads you into the picture or gives you a sense of where the viewer is. For example, a branch and some leaves framing a shot of rolling hills and a valley, or the edge of an imposing rock face leading into a shot of a canyon. Framing can usually improve a picture. The "frame" doesn't need to be sharply focused.

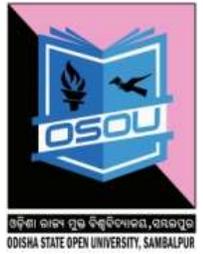
Direction of Movement-When the subject is capable of movement, such as an animal or person, it is best to leave space in front of the subject so it appears to be moving into, rather than out of, the photograph. Diagonals linear elements such as roads, waterways, and fences placed diagonally are generally perceived as more dynamic than horizontals.

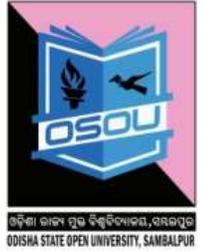
4.5: Check Your Progress

1. Aesthetic values in photography?

2. What is framing?

3. Define rule of thirds?





Further Readings:

The Photography Book by Editors of Phaidon Press, 30 April 2000.

All about Photography by Ashok Dilwali, National Book trust, Year of Publication:2010 New Delhi.

Practical photography by O.P. SHARMA HPB/FC (14 March 2003.

The Photographer's Guide to Light by Freeman John Collins & Brown, 2005.

Lonely Planet's Best Ever Photography Tips by Richard I'Anson published by Lonely Planet

Camera Lucida: Reflections on Photography- Roland Barthes On Photography- Susan Sontag

The Man, The Image & The World: A Retrospective- Henri Cartier-Bresson

Basic Photography- Michael Langford.

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