BHARATI VIDYAPEETH'S
INSTITUTE OF COMPUTER APPLICATIONS & MANAGEMENT (BVICAM)
(Affiliated to Guru Gobind Singh Indraprastha University, Approved by AICTE, New Delhi)
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Lesson Plan

Course: BA (JMC) 205– Basics of Video Camera, Lights and Sound		
BAJMC – 3rd Semester	**No. of Theory Hours per Week: 04**	**No. of Practical Hours per Week: 02**

Course Outcomes (COs):

COs for Theory (BA(JMC)- 205)	
CO_1	Discuss the operations and functions of video camera. (BTL2)
CO_2	Analyze the concept of camera compositions. (BTL4)
CO_3	Appraise various lighting techniques and mechanisms for video production. (BTL5)
CO_4	Elaborate various methods of sound recording in video camera. (BTL6)

Recommended Books:

Books	S. No.	Details of the Books
Text Books	1.	Belavadi, V. (2013). Video production. New Delhi: Oxford University Press
Reference Books	1.	Donald, R., & Spann, T. (2000). Fundamentals of Television Production. Wiley.
	2.	Millerson, G. (1999). The Technique of Television Production. London: Focal Press.
	3.	Zettl, H. (2005). Television Production Handbook, Cengage Learning.
	4.	http://www.videomaker.com
	5.	www.mediacollege.com/video/camera/tutorials

Lesson Plan for Theory:

Lecture No.	Topics/Concepts to be Covered	Reference of the Book and its Chapter
	UNIT - I	
1.	Introduction to the course and syllabus. Course overview, objectives, and	TB1 [Chapters 1-4, 7]

Lecture No.	Topics/Concepts to be Covered	Reference of the Book and its Chapter
	expectations.	
2.	Definition and purpose of a video camera. Comparison between video cameras and still cameras.	
3.	Basic Parts of a Video Camera • Lens: Function and importance in capturing light. • Image Sensor: Role in converting light into electronic signals. • Viewfinder/LCD Screen: Usage in framing and monitoring shots. • Microphone: Importance of audio recording.	
4.	Basic Parts of a Video Camera • Lens: Function and importance in capturing light. • Image Sensor: Role in converting light into electronic signals. • Viewfinder/LCD Screen: Usage in framing and monitoring shots. • Microphone: Importance of audio recording.	
5.	Camera Controls and Buttons • Explanation of essential controls and their functions (e.g., power, record, zoom, focus, white balance).	
6.	Types of Video Cameras Consumer Camcorders: Features and limitations. Professional Camcorders: Advanced capabilities and uses.	
7.	Types of Video Cameras	

Lecture No.	Topics/Concepts to be Covered	Reference of the Book and its Chapter
	Consumer Camcorders: Features and limitations. Professional Camcorders: Advanced capabilities and uses.	
8.	Camera Equipment and Accessories • Tripods and Monopods: Stabilization in videography. • Camera Supports Shoulder mounts and gimbals.	
9.	Video Camera Formats	
10.	Types of storage options (SD cards, SSDs, external hard drives). Pros and cons of different storage media.	
11.	Broadcast Standards and Aspect Ratios Explanation of standard aspect ratios (e.g., 4:3, 16:9). PAL, NTSC, and SECAM: Analog broadcast standards.	
12.	Digital Broadcast Standards • High Definition (HD): 720p, 1080p, and 1080i. • Ultra-High Definition (UHD): 4K and 8K resolutions. Frame Rates • Definition of frame rates (e.g., 24fps, 30fps, 60fps). • Impact of frame rates on video quality and storytelling.	
13.	Introduction to Camera Lenses Prime Lenses vs. Zoom Lenses: Differences and uses.	

Lecture No.	Topics/Concepts to be Covered	Reference of the Book and its Chapter
	Lens Mounts and Compatibility: Types of Camera Lenses • Wide-Angle Lenses: Characteristics and applications. • Standard Lenses: Versatility and common uses. • Telephoto Lenses: Benefits and limitations. Lens Specifications • Aperture: Impact on exposure and depth of field. • Focal Length: Influence on the field of view. • Image Stabilization: Importance in reducing camera shake.	
14.	Introduction to Camera Lenses Prime Lenses vs. Zoom Lenses: Differences and uses. Lens Mounts and Compatibility: Types of Camera Lenses • Wide-Angle Lenses: Characteristics and applications. • Standard Lenses: Versatility and common uses. • Telephoto Lenses: Benefits and limitations. Lens Specifications • Aperture: Impact on exposure and depth of field. • Focal Length: Influence on the field of view. Image Stabilization: Importance in reducing camera shake.	
15.	Camera Filters	

Lecture No.	Topics/Concepts to be Covered	Reference of the Book and its Chapter
	• UV Filters: Purpose and protection for lenses. • ND Filters: Controlling exposure and shutter speed. • Polarizing Filters: Reducing glare and improving contrast.	
16.	Aperture Explained Definition of aperture and its role in controlling light. Aperture Sizes (F-stops): Understanding the scale. Aperture and Exposure Relationship between aperture, shutter speed, and ISO. Depth of Field: How aperture affects sharpness and blur. Creative Use of Aperture Achieving pleasing background blur. Shooting with a Large Aperture: Portraits and artistic shots.	
17.	Depth of Field Defined Explanation of depth of field and its visual impact. Shallow vs. Deep Depth of Field: Applications and effects. Factors Affecting Depth of Field Aperture Size: Relationship to depth of field. Focal Length: Influence on depth of field. Distance to Subject: Impact on the depth of field. Creative Use of Depth of Field	

Lecture No.	Topics/Concepts to be Covered	Reference of the Book and its Chapter
	Selective Focus: Drawing attention to specific elements. Rack Focus: Shifting focus between subjects.	
18.	Introduction to Focal Length Definition of focal length and its relevance in video cameras. Differentiating between zoom and prime lenses. Focal Length and Field of View Relationship between focal length and the field of view. Wide-angle vs. telephoto lenses and their uses. Focal Length and Perspective How focal length affects the perspective of a scene. Demonstrating how different focal lengths can alter the visual impact of a shot. Focal Length and Depth Compression Understanding the compression effect of different focal lengths. Examples of using focal length to enhance storytelling.	
19.	Introduction to Focal Length • Definition of focal length and its relevance in video cameras. • Differentiating between zoom and prime lenses. • Focal Length and Field of View • Relationship between focal length and the field of view. • Wide-angle vs. telephoto lenses	

Lecture No.	Topics/Concepts to be Covered	Reference of the Book and its Chapter
	and their uses. Focal Length and Perspective • How focal length affects the perspective of a scene. • Demonstrating how different focal lengths can alter the visual impact of a shot. • Focal Length and Depth Compression • Understanding the compression effect of different focal lengths. • Examples of using focal length to enhance storytelling.	
20.	Quick Sort and Recursion	
21.	Buffer Reserved for Revision	
	UNIT – II	
22.	• Define television production and its significance in storytelling. • Introduce the concept of visual storytelling and its impact on audience engagement.	TB1 [Chapters 1-4, 7]
23.	• Discuss the importance of understanding shots, angles, movements, and composition in creating compelling visuals.	
24.	Define what a shot is and its role in visual storytelling. Introduce various types of shots, including: • Extreme Wide Shot • Wide Shot (Establishing Shot) • Medium Shot • Close-up Shot • Extreme Close-up Shot	
25.	Discuss the purposes and applications	

Lecture No.	Topics/Concepts to be Covered	Reference of the Book and its Chapter
	of each shot type in different scenarios.	
26.	Showcase examples from TV shows or films to illustrate the differences between shot types.	
27.	Explain the concept of camera angles and their influence on visual storytelling. Cover different camera angles, such as: • High Angle • Low Angle • Eye-Level Angle • Dutch Angle	
28.	Discuss the emotional and psychological impact of each camera angle on the audience.	
29.	Show video clips to exemplify scenes that effectively use different camera angles to convey specific messages or moods.	
30.	Introduce the concept of camera movements and their role in dynamic storytelling. Cover various camera movements, including: Pan Tilt Zoom Dolly/Tracking Shot Crane Shot	
31.	Explain the appropriate use of each camera movement to enhance the visual narrative.	
32.	Show video clips demonstrating the impact of various camera movements on the audience's experience.	
33.	Present the fundamental principles of composition in television production. Cover essential rules of composition, including:	

Lecture No.	Topics/Concepts to be Covered	Reference of the Book and its Chapter
	Rule of Thirds Leading Lines Framing Balance	
34.	Discuss how following these rules can create visually pleasing and engaging shots. Show examples of well-composed frames from popular TV shows or films.	
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36.	Continue discussing the rules of composition in television production. Cover additional composition techniques, such as: Symmetry and Asymmetry Negative Space Point of View (POV) Depth of Field Showcase examples that illustrate the effective use of these composition techniques.	
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38.	Quick Sort and Recursion	
39.	Buffer Reserved for Revision	
	UNIT - III	
40.	• Define light and its significance in photography, film, and other visual mediums.	TB1 [Chapters 1-4, 7]

Lecture No.	Topics/Concepts to be Covered	Reference of the Book and its Chapter
	• Introduce the electromagnetic spectrum and the visible light spectrum.	
41.	Discuss the properties of light, including intensity, color temperature, direction, and quality.	
42.	Explain how these properties affect the look and feel of a scene.	
43.	Explain the nature of light as a form of electromagnetic radiation. Cover concepts like reflection, refraction, absorption, and transmission of light. Discuss how these principles contribute to lighting techniques and effects.	
44.	Introduce various types of lights commonly used in photography, filmmaking, and stage lighting, including: Tungsten Lights Fluorescent Lights LED Lights HMI Lights Natural Light (Sunlight) Strobe/Flash Lights	
45.	Diffusers and Reflectors (60 minutes) • Introduce diffusers and their function in softening and spreading light. • Discuss various types of diffusers, such as softboxes, umbrellas, and scrims, and when to use each one. • Explain the use of reflectors to bounce and redirect light, adding fill and highlights to the subject.	
46.	• Introduce cutters (flags) and their role in shaping and	

Lecture No.	Topics/Concepts to be Covered	Reference of the Book and its Chapter
	controlling light. • Discuss different types of cutters, such as barn doors and flags, and their applications. • Explain the use of gels to modify the colour of light and create specific lighting moods.	
47.	In each session, cover various advanced lighting techniques, including: Rembrandt Lighting Butterfly Lighting Silhouette Lighting Rim Lighting Product Lighting Portrait Lighting Styles (loop, split, and Rembrandt) Mood Lighting for different genres (horror, drama, comedy, etc.)	
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Lecture No.	Topics/Concepts to be Covered	Reference of the Book and its Chapter
50.	Quick Sort and Recursion	
51.	Buffer Reserved for Revision	
	UNIT - IV	
52.	Define the importance of audio in video production and its impact on the overall viewing experience. Introduce the four main audio elements in video programs: • Lip-Synchronized Sound • Voice Over • Music • Ambience and Sound Effects Discuss the roles and purposes of each audio element in enhancing storytelling and creating emotions.	TB1 [Chapters 1-4, 7]
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Lecture No.	Topics/Concepts to be Covered	Reference of the Book and its Chapter
55.	Introduce different types of microphones used in video production, such as: Shotgun microphones Lavalier (lapel) microphones Handheld microphones Explain the importance of choosing the appropriate microphone for specific recording situations.	
56.	Introduce different types of microphones used in video production, such as: Shotgun microphones Lavalier (lapel) microphones Handheld microphones Explain the importance of choosing the appropriate microphone for specific recording situations.	
57.	Discuss the role of audio mixers in balancing and adjusting audio levels during recording.	
58.	Explain how video cameras capture audio and the different audio recording formats. • Introduce audio level controls on video cameras and their significance in achieving optimal audio quality. • Discuss the importance of monitoring audio during recording to avoid issues like distortion or clipping.	
59.	• Explain the concept of audio channels and their relationship to audio recording. • Discuss single-channel (monaural) and multi-channel (stereo) audio recording setups. • Showcase examples of video	

Lecture No.	Topics/Concepts to be Covered	Reference of the Book and its Chapter
	clips recorded with different audio channel configurations.	
60.	Introduce in-camera audio editing capabilities and its application in video production. Discuss how in-camera audio editing can help with trimming and adjusting audio clips during shooting. Provide examples of video clips where in-camera audio editing was used effectively.	
61.	Quick Sort and Recursion	
62.	Buffer Reserved for Revision	

Course: BA(JMC) -253 – Video PRODUCTION LAB	
BA(JMC) – 3rd Semester	**No. of Practical Hours per Week: 04**

Course/Lab Outcomes (COs):

COs for Practical (BA(JMC) -256)	
CO_1	Develop proficiency of skills to operate and handle video system. (BTL3)
CO_2	Create sequences using various camera shots, angles and movement. (BTL6)
CO_3	Develop video using various lighting setups. (BTL6)
CO_4	Design sound for various levels of production. (BTL6)

Lesson Plan for Practical:

Week No.	Lab No.	Topics/Concepts to be Covered	Reference of Lab Manual
1.	1.	Assignment 1: White Balance • Set up your video camera in an indoor location with multiple light sources (such as fluorescent, incandescent, and natural light). • Produce a short video without adjusting the white balance, for each lighting condition. and write an analyses • Adjust the white balance for each recording using video editing tools to ensure accurate colours. • Compare and contrast the original unbalanced segments with the corrected clips and discuss the effect of white balance on colour accuracy.	AP1
2.	2.	Assignment 1: White Balance • Set up your video camera in an indoor location with multiple light sources (such as fluorescent, incandescent, and natural light). • Produce a short video without adjusting the white balance, for each lighting condition. and write an analyses • Adjust the white balance for each recording using video editing tools to ensure accurate colours. • Compare and contrast the original unbalanced segments with the corrected clips and discuss the effect of white balance on colour accuracy.	AP2
3.	3.	Assignment 2: Exposure (Gain, Aperture, Shutter Speed) • Choose a well-lit outdoor setting and prepare your video camera. • Adjust the exposure settings to record a video clip with the	BP1

Week No.	Lab No.	Topics/Concepts to be Covered	Reference of Lab Manual
		appropriate exposure. • Create and Compare under exposed and over exposed video utilizing range of exposure parameters.	
4.	4.	Assignment 2: Exposure (Gain, Aperture, Shutter Speed) • Choose a well-lit outdoor setting and prepare your video camera. • Adjust the exposure settings to record a video clip with the appropriate exposure. • Create and Compare under exposed and over exposed video utilizing range of exposure parameters.	BP2
5.	5.	Assignment 3: Depth of Field (Shallow and Deep) • Choose a scene with a distinguishable foreground and background. • Experiment with various aperture settings in order to control the depth of field. • Produce both shallow and deep depth of field short video. • Discuss how the chosen depth of field enhances or affects the visual storytelling of the scene in the recorded clips. • Document your process, including the camera parameters used for each recording, and provide a thorough analysis of your findings in your lab report.	CP1
6.	6.	Assignment 3: Depth of Field (Shallow and Deep) • Choose a scene with a distinguishable foreground and background. • Experiment with various aperture settings in order to control the depth of field. • Produce both shallow and deep depth of field short video. • Discuss how the chosen depth of field enhances or affects the visual storytelling of the scene in the recorded clips. • Document your process, including the camera parameters used for each recording, and provide a thorough analysis of your findings in your lab report.	CP2
7.	7.	Assignment 4: Type of Shot • Choose a location or setting suitable for shooting a short video sequence. • Plan and shot-list a sequence that incorporates at least six different shot types, considering the purpose and emotional tone of each shot. • Execute the planned shots using a video camera.	DP1

Week No.	Lab No.	Topics/Concepts to be Covered	Reference of Lab Manual
8.	8.	Assignment 4: Type of Shot • Choose a location or setting suitable for shooting a short video sequence. • Plan and shot-list a sequence that incorporates at least six different shot types, considering the purpose and emotional tone of each shot. • Execute the planned shots using a video camera.	DP2
9.	9.	Assignment 5: Lights & Reflection • Choose a location for filming a short video segment indoors and outdoors that will need precise lighting. • Ensure adequate lighting and shadow management by setting up and positioning the lights and reflectors correctly. • Evaluate the lighting setup and the reflectors' contribution to improving the lighting quality by watching the recorded film.	EP1
10.	10.	Assignment 5: Lights & Reflection • Choose a location for filming a short video segment indoors and outdoors that will need precise lighting. • Ensure adequate lighting and shadow management by setting up and positioning the lights and reflectors correctly. • Evaluate the lighting setup and the reflectors' contribution to improving the lighting quality by watching the recorded film.	EP2
11.	11.	Assignment 6: Shoot a short sequence for public service. • Follow the script and ensure you get the photos you want with the right composition and framing. • Make sure the audio is high quality by recording voiceovers or dialogue clearly and any other pertinent background noises.	FP1
12.	12.	Assignment 6: Shoot a short sequence for public service. • Follow the script and ensure you get the photos you want with the right composition and framing. • Make sure the audio is high quality by recording voiceovers or dialogue clearly and any other pertinent background noises.	FP2
13.	13.	Assignment 7: Shoot a talk show on Social Issues	GP1

Week No.	Lab No.	Topics/Concepts to be Covered	Reference of Lab Manual
		• Prepare the studio or set for a talk show by setting up the cameras, microphones, and lights. • Follow the script and have relevant interactions with the chosen guests/experts in order to conduct interviews/discussions. • Gather relevant photographs, videos, or graphics to supplement the narrative and pique the reader's interest.	
14.	14.	Assignment 7: Shoot a talk show on Social Issues • Prepare the studio or set for a talk show by setting up the cameras, microphones, and lights. • Follow the script and have relevant interactions with the chosen guests/experts in order to conduct interviews/discussions. • Gather relevant photographs, videos, or graphics to supplement the narrative and pique the reader's interest.	GP2
15.	15.	Assignment 7: Shoot a talk show on Social Issues • Prepare the studio or set for a talk show by setting up the cameras, microphones, and lights. • Follow the script and have relevant interactions with the chosen guests/experts in order to conduct interviews/discussions. • Gather relevant photographs, videos, or graphics to supplement the narrative and pique the reader's interest.	GP3

Testing Schedule:

Nature of Test	September	October	November	
Surprise Test (ST)	ST in any of the Weeks	-	-	-
Mid Term Test (MT)	-	TBAL	-	-
Class Test (CT)	-	-	CT in any of the Weeks	-
Supplementary Test (Sp. T)	-	-	Sp. T in 1st Week	
Assignment	**Assignment-1** is to be submitted One Week after completion			

Submission Schedule	of Unit-1 and Unit-2. **Assignment-2** is to be submitted One Week after completion of Unit-3. **Assignment-3** is to be submitted One Week after completion of Unit-4.