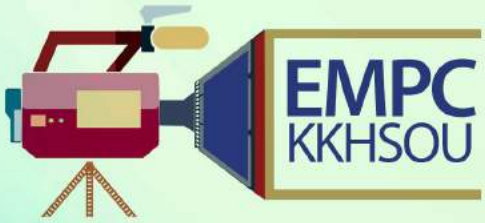
Manual *for* Multimedia Production



ELECTRONIC MEDIA PRODUCTION CENTRE (EMPC)
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EMPC
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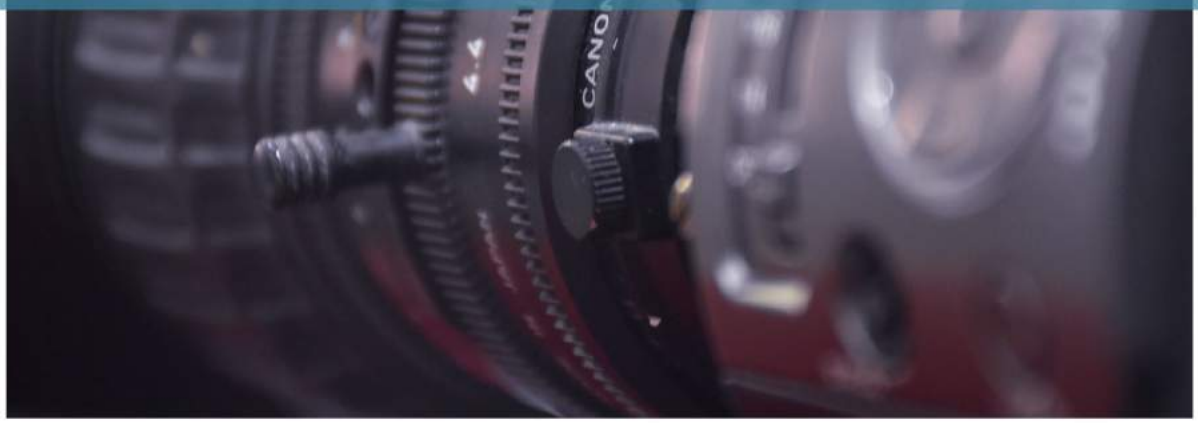
Manual for Multimedia Production

INDEX

1. INTRODUCTION



Krishna Kanta Handiqui State Open University, being North East India's first and only state Open University, has responded to the transformation in the Higher Education sector by developing OER in the format of SLMs, Multimedia videos, audios, documents in digital format (PDF) etc. These materials are accessible to all learners as digital contents/materials, which assist them in learning academic topics through multiple channels for better comprehension. Global recognition of quality education in multimedia format, increasing learner mobility and changing demographic of learning communities have propelled the need of creating learning materials in multimedia format. This is becoming more relevant in this age when the learners have to simultaneously engage in diverse means of employment for livelihood.

The lifelong learning possibilities fecilitated by the ODL institutions have helped the people of any age group to pursue education for upgrading their professional skills constantly. KKHSOU offers its course materials in multiple formats so that the learners can enjoy learning through the ODL mode. The nature and mode of teaching-learning and course delivery are constantly changing in view of the shifting track of employment and the evolving trend of higher education. The ease of access empowered by internet has lent new dimension to the idea of flexible learning. The learning materials produced by the Electronic Media Production Centre (EMPC), KKHSOU are available in digital domain via the website (www.kkhsou.in) maintained by the University.

It is intended that the multimedia materials are envisaged to cater to the growing need of learners with different academic backgrounds, professional commitments and nativity. Moreover, such materials would be crucial in educating the learners where no teacher handholding is possible, reducing financial and operational hurdles. The University is offering these materials via blended mode with the distinguished teachers of six School of Studies who regularly develop and upgrade the learning materials aligned with the latest UGC guidelines. EMPC is committed to producing, streamlining and finalizing the course contents in suitable format until they are ready for dissemination through relevant platforms.

2. MISSION & VISION

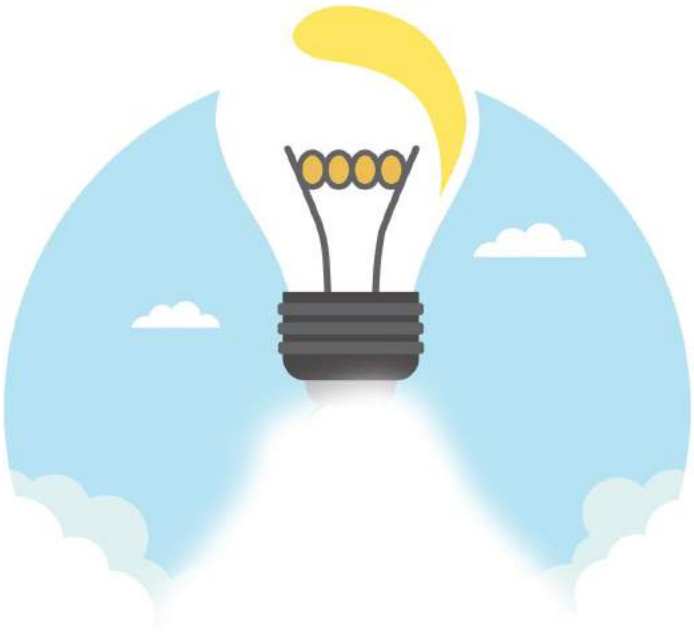
MISSION

The mission of the University is to "reach the unreached". The EMPC is working on a three layered strategy to catch up with the futuristic trends.

1) Supplementation and complementation of the Self Learning Materials (SLMs) (based on curriculum structure) is the main focus area of the Centre. The Centre is continuously adapting the textual learning contents to audio visual format.

2) Dissemination of the Audio Visual Contents in multimple platforms for the maximum outreach among the learners.

3) Repurposing and reorienting the contents into multiple formats for streaming, broadcasting and creating repository of academic contents.



VISION

The world is adapting to the huge knowledge and information pool empowered by uninterrupted internet service and communication technology. The digital data streaming and broadcasting services are also updated continuously. The EMPC wishes to integrate the faster data delivery into the available channels towards supporting a continuous environment where each learner will have equal opportunity to grow and prosper in his/her academic pursuits.

3. QUALITY STANDARDS for AUDIO VISUAL MATERIALS

- The quality standards for audio-visual materials will be as follows:

1) The audio visual material shall supplement and complement the Self Learning Materials (SLMs) which are prepared based on the SLM Policy and Guidelines for SLM Writers and Content Editors.

2) While preparing the materials, the faculty members would make adequate consideration of

   a) Learner's prior knowledge, skills and attitudes,
   b) Use of clear and unambiguous style of presentation and language free from pedagogic jargon,
   c) Providing clear information on types of support material and study activities,
   d) Profile of target audience and their needs,
   e) Meeting the requirements of learning outcomes.

3) The Audio-visual materials shall be developed in forms and formats that will be easily accessible by the learners and are compatible with web based delivery.

4) The Electronic Media Production Centre of KKHSOU will work in close coordination with the faculty members for making the content interactive with appropriate use of graphics, animation, simulation etc. to keep the learners engaged.

4. MULTIMEDIA STUDIO AT A GLANCE

• Production Facilities

The Multimedia Studio is equipped with the latest High Definition video camera, lighting system and accesories like teleprompter that have provided the production team and content creators with wide variety of approaches in producing academic contents. The audio recording facilities include lavelier microphone, six track portable audio recorder, ultra portable audio recorder that are capable of capturing high quality audio signals for web, TV and similar platforms.

• Interactive Lighting

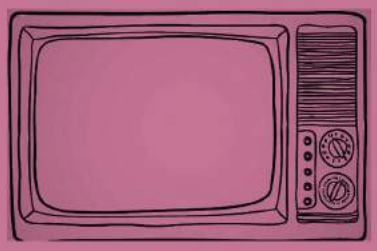
The interactive lighting system has empowered to the studio to control light on the entire floor from a single point hub. The intensity of the lights can be controlled for producing desired for creating variety of ambience.

• High Definition video cameras

The studio is equipped with broadcast quality high definition video cameras that is capable of 4K video recording thereby producing better quality video and audio

• Green Screen / Chroma Keying

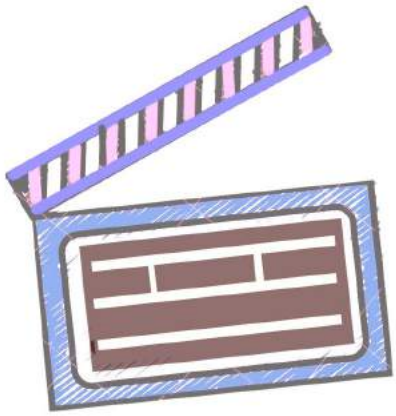
The multimedia studio also offers blue screen / chroma keying facilities for in house programmes. With this technique, the actual background of the presenter / person can be changed to more suitable visual background as per need and context.



5. GUIDELINES FOR VIDEO PRODUCTION

The multimedia team adheres to the following guidelines while producing videos

Guidelines for Recording (Technical as well as general specifications)



Frame size : 1920 x 1080 (Width X Height)
Aspect Ratio : HD (1920x1080) (16:9)
Video Compressor : XDCAM HD
Audio rate : 48 kHz
Audio depth : 16 bit
Video frame rate : 25 FPS
Output format : .MP4 / .MOV
Editing software : Final Cut Pro (FCP), Motion, Adobe After Effects, Adobe Premiere Pro

Duration :

The duration of each lecture video varies from 10 minutes to 30 minutes according to the requirement of the distribution platform.

Model Guidelines for Contributors:

The contributors are requested to consider the following sequences while developing audio-visual lectures.

1) Learning Objectives
2) Apprisal of Prior Knowledge
3) Learning Contents
4) Examples, anecdotes, illustrations
5) Questions to judge learning progression
6) Summary
7) References

6. GENERIC GUIDELINES FOR DIGITAL CONTENT CREATION

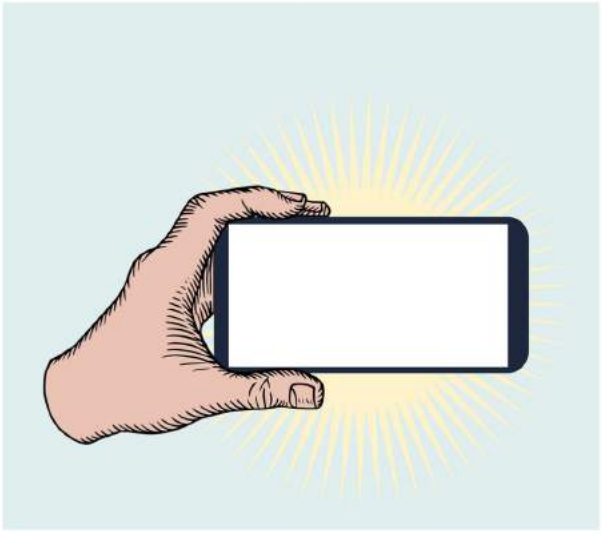
(FOR TEACHERS)

1) Please record in Full HD format only. This can be confirmed by choosing options like 1080P or Full HD or FHD from the Video camera menu options / settings.

2) It is preferable to use Mobile Phone camera in Full HD mode than the inbuilt web cam of the laptop.

3) Please choose a quiet, calm environment for recording for obtaining clarity in audio recording.

4) Please hold the mobile phone horizontally while recording.



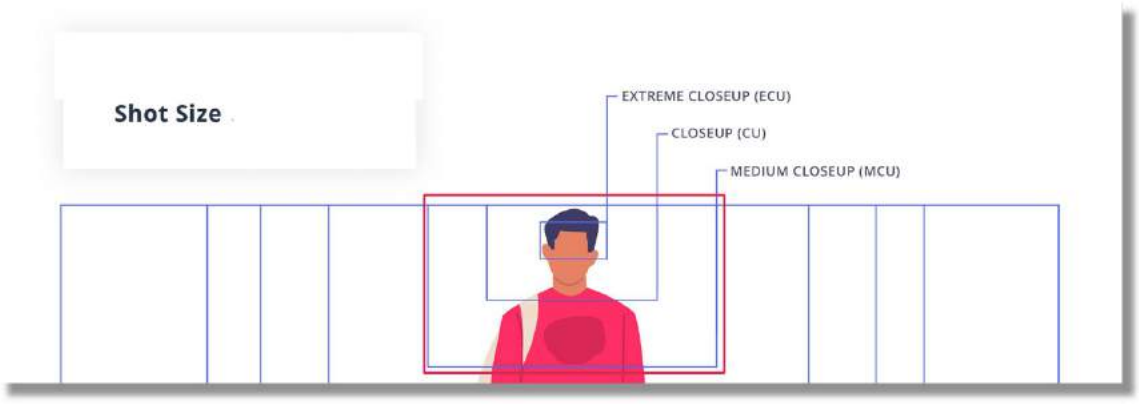
6. GUIDELINES FOR DIGITAL CONTENT CREATION

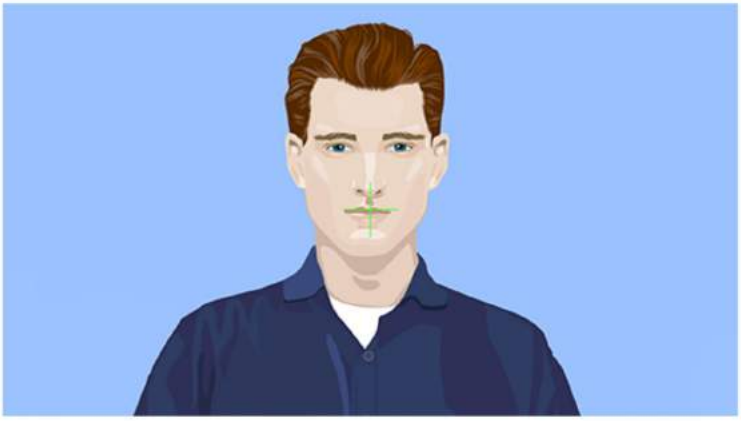
(FOR CONTRIBUTORS)

cont.

5) Please choose a plain background with blue, green, white or other light colour preferably.

6) Please choose a Medium Close Up (MCU) level framing of the speaker with appropriate headroom. **Headroom** refers specifically to the distance between the top of the subject's head and the top of the frame.

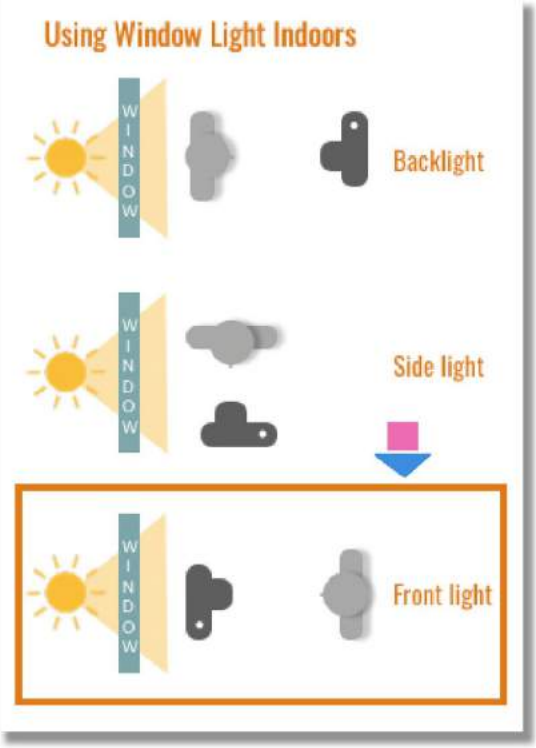




6. GUIDELINES FOR DIGITAL CONTENT CREATION

(FOR CONTRIBUTORS) cont.

7) Please try to balance light on both sides of the speaker. Generally, daylight coming from window is the natural and suitable source of light for recording with minimum resources. Facing the window and placing the mobile camera in between the window and the speaker (the lowermost highlighted diagram) will produce bright, crisp image. A semi transparent curtain covering the window will filter harsh light and will help in even distribution of it. If required, You may choose household bulb, portable LED light to get rid of unwanted darkness or shadows.



8) Please place the mobile phone (or other recording device) at the eye level of the speaker. There are some tripods for placing the mobile at the required height for the purpose, which can be operated without external help.

9) The speaker is requested to look at the mobile phone more often so as to have a connection with the learners.

10) Please choose the apparel colour in such a way that it is in some contrast to the background shade.

7. PLANNING
for
AUDIO VISUAL CONTENT CREATION

- All AVs to be of total 10 minutes duration as per latest UGC guidelines.
- An overall INTRODUCTORY audio-video(AV) for the entire Unit/Course, spelling out the objectives and outcome, with a note of motivation to the learners.
- Another brief INTRODUCTORY video (containing brief about the unit /part of the unit explaining what the learners would learn) of about 1 minutes should be incorporated before each video of the unit.
- Total no of AVs to be prepared for one single Unit to be determined in advance. Also total no of AVs to be produced for the entire Course to be determined in advance.
- All the required AVs to be classified into four different formats such as lecture mode, discussion mode, debate mode and interview mode.
- **Selecting the content experts/contributors –**

  As far as possible in-house faculties would present the lectures themselves. If in-house faculties cannot cover all of the planned AVs, a panel of outside contributors to be prepared in advance and approval is to be taken.
- A brief script/ note outlining the lecture contents and supplementary learning materials like digital images, graphics, slides may be submitted by the contributors to the EMPC production team for seamless post production and final output creation.

8. DESIGN & PRODUCTION

POSSIBLE FORMATS OF THE AVs

LECTURE MODE

All available tools like animation, simulations, PPTs, whiteboard and photographs or videos to be used to make the lecture brief, concise, simple and visually appealing / engaging.

DISCUSSION MODE

Discussion with an expert on a certain topic. Discussion with two or more learners with one or more experts.

DEBATE MODE

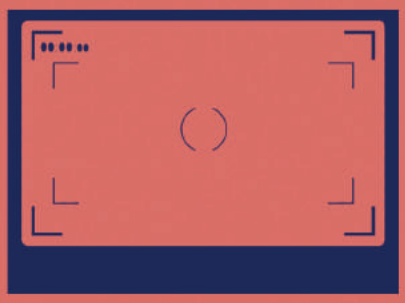
The topic to be discussed is to be designed in the mode of a formal debate session.

INTERVIEW MODE

One expert/writer/renowned scholar may be interviewed on the topic specified.

9. IMPORTANT POINTS for THE CONTENT CREATORS

- All materials incorporated in the AVs shall not violate the copyright principles.
- Page visual content must always conform to the textual content visually.
- Title of the Images may be provided on top of the visual, and the captions at the bottom of the visual.
- No auto-run animations.
- No tampered, intentionally provocative, gender- biased use of language.
- Supplementary learning materials like photographs, slides, graphics, animations should be submitted to the EMPC production team on or before the specified recording date.



10. VIDEO COMPOSITION

Video Composition

The present practice is to capture the lecture with the help of three cameras. One camera is positioned in front of the contributor, establishing an 180 degree axis between the speaker and the camera. The second camera is placed 45 degrees to the left of the first camera for recording another perspective of the person. The third camera is placed to the right of the frontal camera with an aim to capture the explanatory notes / writing on the board or any other digital display device used by the teacher.

Frame Composition

The frontal camera will use mid close up and close up shots of the speaker. The other two will switch between mid shot to mid close depending on the importance and emphasis of the speaker. Symmetrical and centre weighted frame is chosen for the speaker, sometimes Rule of Thirds is used to compose other learning tools, elements. Eye level height is chosen for the presenter to maintain the ambience of normal interaction with the viewer.

The video should be clear, precise and accompanied by the presence of teacher / resource person/ subject matter expert upto 75% of the total screen time. To aid in comprehension of the subject in a holistic way, the primary video feed from the camera may be interspersed with animated text, graphics, relevant slide, images, open source video footage etc.

11. TECHNICAL SPECIFICATIONS

VISUAL STYLE : Typography

Fonts predominantly used are : a) Cambria and b) Helvetica

FONT SIZE : Heading : 76 pt +
Slide content : 48 pt +

COLOUR PALLETE : Split Complementary between blue and yellow

EDITING : The purpose of the editing is to present a clear, succinct presentation devoid of discontinuity, audio mismatch and so on. To achieve this, Video Transitions like dissolve, peel are used to create a continual feel over the cuts. Shots of different image magnification like Mid Close, Close Up , mid shot, are knitted by continuity device like insert, superimposition and Sound cut.

MUSIC: The signature tune and graphics is developed by the University with the help of the professional artists.

SHOT TYPES : Since lectures are recorded in the indoor multimedia studio, shot generally vary from close to mid close. Considering the floor area of the studio, the possibility of wide opening shot does not arise.

A stable visual scale is maintained interweaved by moderately changing image magnification.

CAMERA PLACEMENT : As already mentioned, three cameras continually capture the lecture focusing on the speaker and learning tools. The focus is adjusted manually with the change in the position of the speaker. The recordist is well versed with the movemet pattern and pulls the focus intuitively to give sharp image. As mentioned earlier, camera is placed at the eye level of the presenter to help in easy interaction with the audience. The camera is mounted on tripod for image stability.

COMPOSITION PLAN : The following guidelines are followed while making the composition

1) The cameras are mounted on the tripods to generate stabilized, jerk free image.

2) Depending on the movement pattern of the presenter, the DSLR camera is deployed to capture the movement, while other two cameras record static visuals.

3) Optical zooming is avoided while recording is going on.

4) Objects in the background is left from the primary composition area so that it does not attract the viewer.

TECHNICAL SPECIFICATIONS

cont.

LIGHTING : Fill light is mostly used. Directional light is avoided as it may have sharp shadow area. Moreover, bounce lighting technique is used to subtly reflect light is high penumbra zone.

NARRATION : Narration as such is not utilized as the primary mode of communication. Synced audio and video (lecture by the speaker) is accompanied by the relevant slides, photos or graphics. Once the subject matter expert/ teacher/ resource person is established, the video may be layered with related slides, images, graphics.

OPENING ADDRESS : For TV programme i.e. *Ximar Paridhi Bhangi* – an anchor addresses the public about the upcoming topic with a brief introduction about the speaker. For general AV lecture, the introduction of the speaker is communicated to the audience via a text slide.

PRIMARY IMAGING DEVICE : Prosumer Camcorder (BRAND : JVC Corp, Japan) with HD video recording capabilities.
Storage : Flash Memory cards

Dual purspose image recording (Video and Still)

Nikon D5600 DSLR camera with 18-140 mm lens.

It can capture 24.2 MP high resolution image as well as Full HD videos with a resolution of 1920 X 1080 pixels.

Segments of Video Production

The video is presented in a sequential format containing the following segments

1) Introduction of the Topic: The Topic is introduced by the presenter delineating the sub topics, the learning objectives and probable queries.
2) Introduction of the Contributor: Usually done by text slide in addition to the self introduction by the presenter.
3) **Core Teachings:**
   a) Slide : The slides aid in comprehending complex ideas visually by presenting a schematic flow of the narrative in discussion.
   b) Video: The videos demonstrate the theoretical aspect of the text by interweaving the learning instructions in a plausible digression that would immerse the learner deep into the topic.
   c) Images: Related images, digital scans, photographs are inserted in coherence with the narrative.
4) Lecture Summary: The contributor presents a reminder of core learning takeaways and plan an outline of the lecture for next lesson.

TECHNICAL SPECIFICATIONS

cont.

Source Material :

The source materials used are Self Learning Materials (SLMs) developed by the Faculties of various disciplines of the University. The source materials are repurposed depending on the need of the target users and the distribution platform used.

The usual deadline for completion of one episode (unit) from shooting to post production is 48 hours.

The length varies depending on the format and chosen platform for distribution.

The slides are made in High Definition format to match the output resolution.

Graphic stills, scans, pdfs, open source photographs are inserted to make the video presentation interesting.

The videos and processed videos would be distributed via official YouTube channel of the University, Swayam, Swayam Prabha and TV channels as may be applicable.

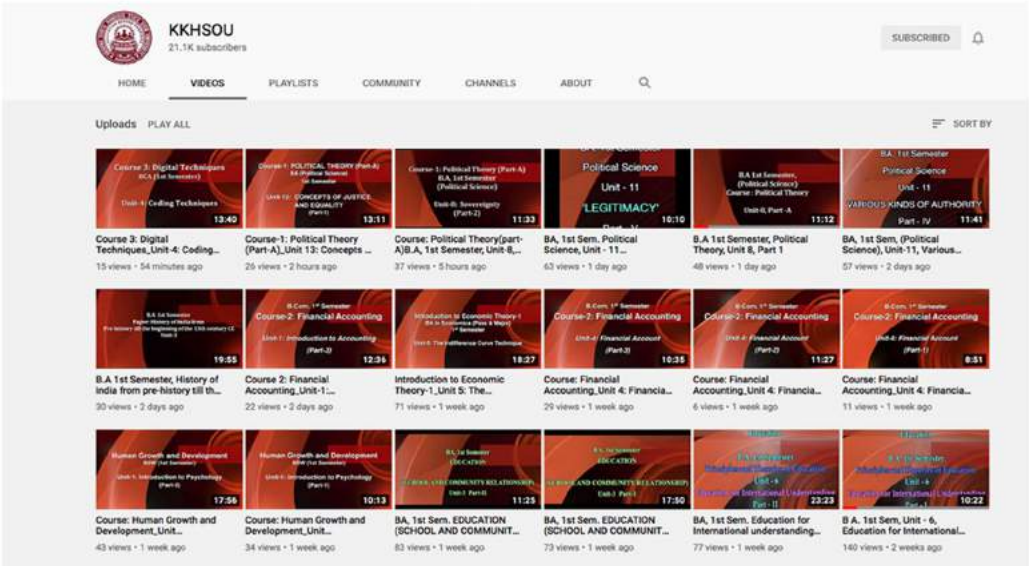
12. ACCESSIBILITY AND NAVIGATION

The video lectures can be accessed by logging into the Official YouTube channel of the University by navigating into the link https://www.youtube.com/user/kkhsou/videos over the internet through different devices.

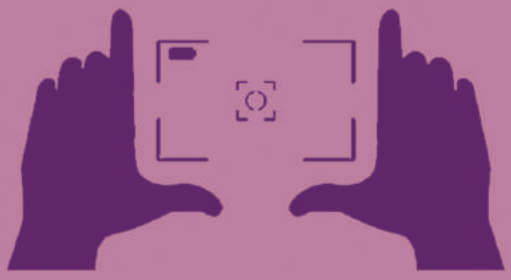
The Official Youtube Page can be accessed by scanning the barcode inserted at the left with a barcode scanner app on android devices.

For the Academic programmes having practical papers, learners are provided with relevant demonstration videos in CD format.

Visually Impaired learners are provided Self Learning Materials (SLMs) in the Audio CD format. Special care is taken to record audio in coherence with the Self Learning Materials (SLMs) of the particular academic programme as per the request of the Visually Impaired learners.



Adequate effort is taken to minimize the file size of videos so that they will be easily accessible by the learners and compatible with web-based delivery. The contents are proposed to be interactive with the use of graphics, slides to aid in comprehension. The Videos are developed in chronological order unitwise in each course and uploaded accordingly in order to ease Navigation. The videos are intended to offer scope for two way communication between the contributors and the learners paving the way for interaction through virtual and blended mode.



13. GLOSSARY OF TERMS

Glossary of terms used

Image magnification : It refers to the proportional increase in the dimensions of a recorded object relative to the actual dimensions of that object. In video and filmmaking parlance, the term image magnification is used to convey the relative size of the object to be shot so that the cinematographer can frame a suitable composition of the object/ actor.

Shot : The series of images which are recorded continuously and sequentially from the time the camera starts recording until it stops constitute a video shot.

Close Up : A shot in which the head of a person, or a small object is shown in such a way that it fills up the entire area of the visual space .

Mid Shot : A shot in which the object is placed at intermediate distance from the camera allowing some part of the object to be seen in more detail while also capturing a part of the background.

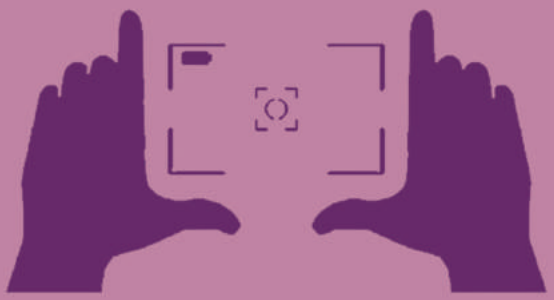
Non linear editing : An approach to audio visual editing in which any frame or sequence can be accessed randomly by the editor.

Linear Editing : Linear editing is the technique of film or video editing in which the editor can access the frames in a linear manner not abruptly.

Three-point lighting : Three-point lighting is a conventional approach towards lighting a subject in closed space preferably, with light casting from three different spots. These lights are called key light, fill light and backlight depending on the nature of cast and fill.

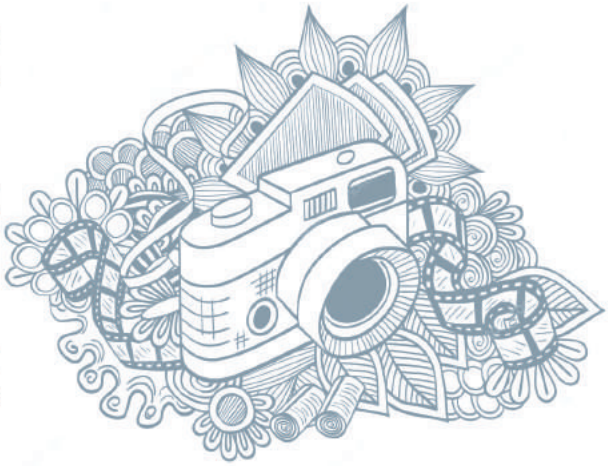
Aspect Ratio : In cinematographic parlance, aspect ratio signifies the relationship between the width and the height of an image.

Leading Line : The line that indicates the direction of movement of the central figure or visual element.



13. GLOSSARY OF TERMS

cont.



Head Space : Head space is the area between the top of a subject's head and the uppermost border of the Field of View.

Camcorder : The digital video cameras with digital storage unit that can record audio and video for playback.

Post Production : The creative process of film and video production that takes place after the film is shot including editing and visual effects and sound design.

Blue Screen/ Chroma : The blue or green backdrop in front of which the actors are shot. Later in post production, the blue area can be removed using suitable editing application and replaced by digitally created images or Computer Generated Imagery (CGI). The idea behind using blue or green colour is that these two colours are placed opposite to the skin color of humans making it easier for us to remove the characters.

Pixel : A pixel (derived from the word Picture Element) is the smallest building block of a digital image that can be represented on a digital display device that together constitute an image.

Resolution: Resolution is defined as the amount of detail the sensor of a digital camera can capture and process, and it is measured in pixels. Higher the resolution, more detailed the image captured and subsequently it can be viewed in larger / wider platforms without pixelation.

Focal length : Focal length is the distance between the optical center of a lens and the image sensor when the lens is focused at infinity.

Multimedia : Multimedia is the integration of different media tools/platforms and formats to create an immerssive presentation for interation, communication education and entertainment etc. purposes.

Production : In film or theatre perlance, production refers to the essential steps to be undertaken by the responsible crew/ controlling groups leading to an acceptable output within the domain of particular artistic practices.

14. EMPC TEAM

• STAFF DETAILS

1. **Director (i/c):** Professor Arupjyoti Choudhury

Former Professor, Department of Political Science, Cotton College, former Dean (Academic) KKHSOU and currently Registrar at KKHSOU.

E-mail id: registrar@kkhsou.in

Contact : 98640 38946

2. **Deputy Director:** Dr. Sangeeta Kakoty

B.E. in Computer Sc. & Engineering, Masters and MPhil in Computer Science and Ph.D. in Computer & Information Science.

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3. **AV Production Executive:** Mr. Utpal Bhattachajya

B.Sc. in Animation & Multimedia, Masters in Comm. & Journalism, PGCC in Direction from FTII, Pune

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4. **Programme Assistant:** Mr. Hemprokash Mout

PGDBJ and MMC from KKHSOU.

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5. **Audio-Visual Production Technician:** Mrs. Rashmi Duwarah

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6. **Audio-Video Production Technician:** Mr. Bitu Das

PGDCA, BMC and MMC from KKHSOU.

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TOPIC
Group Behaviour
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Newly built
multimedia
studio at First Floor,
H-Block of the Khanapara
campus of the
University

Designed and developed by

Electronic Media Production Centre
Krishna Kanta Handiqui State Open University
Khanapara, Guwahati-22

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