

SYLLABUS

SEM ESTER-1

BASIC-1

FILM TECHNOLOGY

Credits-3

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1. Basic elements

The Motion Picture Camera, The projector, Recording Sound, Editing Picture
And sound, Special effects, animation. Human eye and Perception of movement

2. Motion photography

Multiple camera for capturing movement by Edward Muybridge (1877), Emile
Reynaud, Praxinoscope, the mechanism of taking a sequence of pictures in a
single camera, medium to record the multiple images

Technology for rapidly advancing the medium, intermittent movement, Maltese
cross, Sensitive glass plate, photo paper to celluloid backing emulsion
(1872)George Eastman company, Kodak still camera

3. Camera, Film and Projector Design

Thomas Edison and his motion picture camera in 1889, Kinetograph, 35 mm film
by George Eastman as per Edison's specification, Kinetoscope the peep show
cabinet, Camera-Projector combination Cinematograph, intermittent movement,
flicker in the projection, introduction of loop in camera and projector, Carbon-arc
lamps for brightness in projection

4. Sound in Motion picture

Sound recording and reproduction, Amplifier for sound reproduction in
auditorium, synchronization of sound with motion picture, recording media, Disc
recording, Vita-phone system, Sound on films, Variable density and variable
area recording

Standardization of frame rate in motion picture, development of sound
technology, Blimped camera, directional microphone, microphone boom, quieter
lights, technology to add, edit and mix sound separately

5. a) Color Theory:

Monochrome by chemical toning, three strip photography, additive and subtractive color, Technicolor process, Agfa color, Ansco color and Eastman color

b) Wide screen:

Change of aspect ratio, Cinerama, 360⁰ projection, stereoscopic cinematography, Cinemascope, Anamorphic lens

Reference Books:

1. "Motion Picture technology": Britannica By Roger Manvell
2. "Cinematography"- 3rd Edison by Malkiewicz & David Mullen ASC
3. "Notes on the Cinematograph" by Robert Bresson
4. Principles of Digital Image Synthesis-Vol-1 by Andrew S. Glassner
