

SYLLABUS

SEMESTER- 7

Sound Recording & Sound Design

SP.PAPER-5

Advanced Studio Recording Technique

Credits-3

L	T	P
3	0	10

1. Introduction to surround sound -

- 1.1 Spatial hearing - acoustical parameters for perception - localization in the horizontal and vertical plane , perception of distance, perception of spatial impression
- 1.2 Mechanism of localization - Interaural Time Difference—ITD and Interaural Level Difference—ILD
- 1.3 Difference between mono, stereo and surround sound - Evaluations Concerning the Interaction Between Loudspeaker directivity and Listener Envelopment ,Phantom image
Surround Microphones- Multichannel Microphone Array

2. How surround sound works -

- 2.1 Early surround- Fantasound, Techniques of surround sound- Dolby surround, Dolby pro logic, 4-2-4 processing system, Digital surround sound system-Dolby digital / DTS ,5.1, DTS, SDDS, 12 channel, Dolby digital – EX
- 2.2 Surround channels- Matrix and discrete channel , codec for surround –Ac-3 Thang, DTS coherent acoustic audio
Monitors and amplifiers, Bass management, use of LFE channel, center caveats
Precise speaker placement—angel and position, Calibration gear , TV & Film calibration
- 2.3 Surround Export and Codec - Data compression , export to multiple files, Dolby digitals
(AC3) metadata, DTS, SRM, MP4, 5.1, Auro and other latest surround encoders and decoders. Surround down mix-Lo/Ro & Lt/Rt

3. Audio post surround mixing Technique

- 3.1 Decision about sound track – grouping of sound families – voice rule , use of room tones,
- 3.2 Proper placement of sound effects with visual counterpart ,layering of back ground sound Exit sign effect

3.3 Surround experience –Influence of sound in human psychology (audience involvement V/s audience perspective)

Creating surround- Surround positioning, Creating surround using effects

Balancing of sound track – Dialog , Music and Effect (DM&E),Final sweetening, Post mixing

4. Sound Designing-

4.1 Concept of sound designing – What is sound design , Diegesis In Sound Design, prototype sound design, Impact of Psychoacoustic

4.2 Elements of design- Line and Shape, Colour, Texture, Tonal variations , Contrast & Balance

4.3 The Cinematic Soundtrack and codes of sound design - dialogue, voice over, sound effects, ambience/natural sound, music and silence - sound hierarchy, sound perspective synchrony, sound bridges, sound montage and off-screen sounds

5. Techniques and Process of Sound Design

5.1 Basic sound design technique- Script analysis and pre-production design, Production sound report, Sound spotting

5.2 Recording, Sound editing, Sound mixing, Design synchronization, Tools and techniques of editing sound, sound imaging design

5.3 Sound balancing and Perspective

Reference book -

- The Art and Science of Surround and Stereo Recording
- Instant surround sound
- Sound design in film by Gabriel Thuku Kimani