

MTD207 Video Technology

Level: 2

Credit Units: 5 Credit Units

Language: ENGLISH

Presentation Pattern: EVERY JULY

Synopsis:

This course introduces to the students the principles of video technology, and its application in multimedia productions and broadcasting. Students will also learn the methods and techniques used to capture, encode and decode video signals and television images.

Topics:

- Introduction to Digital Video
- Video Principles
- Video Sampling
- Digital Video Processes and Interfaces
- Video Compression and MPEG
- Codecs
- Properties of the Eye and Video Systems
- Non-linear Video Properties
- Digital to Analog Conversion
- Jittering and quantization
- Broadcasting
- Channel coding, transmitters, transport and delivery

Textbooks:

MTD207 Study Guide (UDC - SUSS) SUSS

ISBN-13: SG-1050

The Art of Digital Video 4th Focal Press 2000, Elsevier, Watkinson, J. Taylor & Francis

ISBN-13: OT-4918

MTD207 Lab manual

ISBN-13: OT-1970

Learning Outcome:

- Describe digital video transmission and recording principles
- Discuss the techniques used in broadcasting to detect and correct errors
- Demonstrate the principles of analogue-to-digital and digital-to-analogue conversion
- Relate the structure and function of the human eye to the development of video systems
- Apply video compression and the MPEG format for recording and broadcast applications
- Calculate sampling rates, frame rates, and other requirements associated with video technology

Assessment Strategies - Regular Semester (Evening Class):

Components	Description	Weightage Allocation (%)
Overall Continuous Assessment	PRE-CLASS QUIZ 1	2
	PRE-CLASS QUIZ 2	2
	PRE-CLASS QUIZ 3	2
	TUTOR-MARKED ASSIGNMENT 1	15
	QUIZ 1	9
Overall Examinable Components	Written Exam	70
Total		100

*The information listed is subject to review and change.