

# 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:**

Watkinson, J: The Art of Digital Video (eTextbook) 4th ed Focal Press 2000, (Taylor & Francis)  
ISBN-13: 9781136027703

Watkinson, J: The Art of Digital Video (eTextbook) 4th ed Focal Press 2000, (Taylor & Francis)  
ISBN-13: 9781136027703-AA

**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:**

<b>Continuous Assessment Component</b>	<b>Weightage (%)</b>
TUTOR-MARKED ASSIGNMENT	15
PRE-CLASS QUIZ	2
PRE-CLASS QUIZ	2
QUIZ	9
PRE-CLASS QUIZ	2
<b>Sub-Total</b>	<b>30</b>

  

<b>Examinable Component</b>	<b>Weightage (%)</b>
Written Exam	70
<b>Sub-Total</b>	<b>70</b>

**Weightage Total** **100**