COURSE TITLE	**TE142450: Video Compression** Credits: 2 ELECTIVE COURSE
LEARNING OBJECTIVES	To study modern efficient techniques of video coding for multimedia communications and distribution.
COMPETENCY	The students are expected to: • Understand video characteristics and how to esploit them for compression. • Understand video compression algorithms: waveform- and content-based. • Be able to simulate the implementation of discussed techniques and analyze its performance.
SUBJECTS	• Review: information theory • Video characteristics: redundancy & psychovisual aspects • Video coding principles • Motion detection & estimation • H264/AVC • Scalable video coding • Distributed video coding • Transform-based multiview video coding
MAIN REFERENCES	• Ahmet Kondoz, Visual Media Coding and Transmission, Wiley, 2009.
OPTIONAL REFERENCES	• Al Bovik, The Essential Guide to Video Processing, Academic Press, 2009. • Yun Q. Shi & Huifang Sun, Image and Video Compression for Multimedia Engineering: Fundamentals, Algorithms, and Standards, 2nd ed., CRC Press, 2008. • IEEE Trans. on Multimedia • IEEE Trans. on Image Processing
PREREQUISITE	