

**MULTIMÉDIA : CONCEPTS ET TECHNOLOGIES****MULTIMEDIA : CONCEPTS AND TECHNOLOGIES****Lecturers:** Emmanuel DELLANDREA, Mohsen ARDABILIAN

| Lecturers : 16.0 | TC : 0.0 | PW : 18.0 | Autonomy : 14.0 | Study : 0.0 | Project : 0.0 | Language : FR

Objectives

This course aims to familiarize students with the fundamental concepts of multimedia and technologies, systems and methods of multimedia analysis. Communication is one of the factors for the development of industry and the individual in modern societies. The rapid change in emerging societies and technologies is testament to the ever-changing nature of media and environments, as well as the messages conveyed. Indeed, today it is increasingly easier to convey an idea through a combination of text, image, audio and video documents than through a simple text document. A multimedia document thus follows a life cycle that undergoes various transformations. This course describes the fundamental concepts by placing them in a global

Keywords : Interactivity, Information, Media, Digital, Video, Audio, Text, Audiovisual, System, Content, Content analysis, Compression, Standard, Standard

Programme

- 1) Basic terminologies and concepts: Visual and auditory perception. Sampling and quantification. Acquisition of sound, image and video. Acquisition systems.
- 2) Multimedia analysis and its applications: Multimodal content analysis (visual modality, audio modality, temporal modality). The principles of coding and compression. Automatic indexing. Automatic structuring (summary, chaptering, etc.).
- 3) Presentation of standards and standards for description, compression and synchronization: H.26x, JPEGs, MPEGs, SMIL and others.

Learning outcomes

- Understand the general principle of the different coding and compression processes applied to images, audio and video.
- To be able to identify the most suitable coding and compression techniques according to the nature of the multimedia data.
- Understand the principle of multimedia analysis methods.
- Know how to implement audio / video analysis methods (segmentation, classification).

Independent study

Objectifs : Allow students to assimilate notions and concepts seen in class and in BE.

Méthodes : Coaching and question-and-answer sessions.

Core texts

P. Bellaïche, , *LES SECRETS DE L'IMAGE VIDÉO.*, Eyrolles., 2002
T. Vaughan. *MULTIMEDIA-MAKING IT WORK (5ÈME ÉDITION)*, McGraw-Hill., 2002
N. Chapman & J. Chapman. *DIGITAL MULTIMEDIA.*, Wiley., 2000

Assessment

Final mark = 63% Knowledge + 37% Know-how
Knowledge = final exam
Know-how = continuous assessment