Program	09TT- Engineering in Telecommunication Technologies and Services

Course number and name	
Number	95000074
Name	Audiovisual communications Comunicaciones audiovisuales
Semester	Y4-S8

Credits and contact hours	
ECTS Credits	6
Contact hours	60

Coordinator's name	Narciso García Santos

Specific course information		
Description of course content		
This course covers the techniques most commonly used in audiovisual communications considering the possibilities offered by the current communication systems.		
List of topics to be covered		
1. Introduction. 2. Generation and representation of audiovisual signals. 3. Transport of audiovisual information. 4. Description and evaluation of audiovisual communication systems. 5. Quality analysis. 6. Immersive systems and synthetic video. 7. Evolution.		
Prerequisites or co-requisites		
It will be assumed that students have knowledge on signals and systems, random signals and digital signal processing.		
Course category in the program		
__ R (required)	**__ E (elective)**	**_X_ SE (selective elective)**

Specific goals for the course
Specific outcomes of instruction
RA1: Knowledge and characterization .of the elements of visual communications systems RA2: Knowledge of practical problems that can be resolved through audiovisual communications systems. RA3: Knowledge of the techniques of capture, representation, processing, storage, compression, transportation and presentation used in audiovisual communication services and applications. RA4: Knowledge of techniques and tools to analyze, specify, implement and maintain audiovisual communication systems. RA5: Knowledge of the techniques required for the handling and distribution of multimedia content: creation, encoding, management, transport and broadcasting.

RA6: Use of mathematical and conceptual tools that underlie audiovisual communications. RA7: Use of computer tools required for the implementation and management of audiovisual communications systems.
Student outcomes addressed by the course
CG2, CG3, CG4, CG5, CG9, CG10, CG12 CESI1, CESI2, CESI5

Bibliography and supplemental materials
– PDF version of the slides for this course (available on-line at UPM's Moodle repository: http://moodle.upm.es/titulaciones/oficiales) – A. Bovik, The Essential Guide to Video Processing, Academic Press, 2009. – M. van der Schaar, P.A. Chou, Multimedia over IP and Wireless Networks, Academic Press, 2007. – Y. Wang, J. Ostermann, Y.Q. Zhang, Video Processing and Communications, Prentice Hall, 2002.

Teaching methodology			
_X_ **lectures**	_X_ **problem solving sessions**	__ **collaborative actions**	_X_ **laboratory sessions**
Other:			