

230027 - CCAV - Audiovisual Coding

Coordinating unit: 230 - ETSETB - Barcelona School of Telecommunications Engineering
 Teaching unit: 739 - TSC - Department of Signal Theory and Communications
 Academic year: 2019
 Degree: BACHELOR'S DEGREE IN AUDIOVISUAL SYSTEMS ENGINEERING (Syllabus 2009). (Teaching unit Compulsory)
 BACHELOR'S DEGREE IN TELECOMMUNICATIONS TECHNOLOGIES AND SERVICES ENGINEERING (Syllabus 2015). (Teaching unit Optional)
 ECTS credits: 6 Teaching languages: Spanish

Teaching staff

Coordinator: Antonio Bonafonte, Luis Torres

Degree competences to which the subject contributes

Generical:

12 CPE N3. They will be able to identify, formulate and solve engineering problems in the ICC field and will know how to develop a method for analysing and solving problems that is systematic, critical and creative.

Teaching methodology

Learning objectives of the subject

Study load

Total learning time: 150h	Hours large group:	52h	34.67%
	Hours small group:	13h	8.67%
	Self study:	85h	56.67%

230027 - CCAV - Audiovisual Coding

Content

<p>(ENG) Tema 1. Introducció i Principis bàsics de codificació</p>	<p>Learning time: 6h Theory classes: 2h Laboratory classes: 2h Self study : 2h</p>
<p>Description:</p>	
<p>(ENG) Tema 2. Codificació entròpica</p>	<p>Learning time: 14h Theory classes: 6h Laboratory classes: 2h Self study : 6h</p>
<p>Description:</p> <p>Specific objectives:</p>	
<p>(ENG) Tema 3. Codificació de veu</p>	<p>Learning time: 26h Theory classes: 12h Laboratory classes: 2h Self study : 12h</p>
<p>Description:</p>	
<p>(ENG) Tema 4. Codificació d'àudio</p>	<p>Learning time: 22h Theory classes: 10h Laboratory classes: 2h Self study : 10h</p>
<p>Description:</p>	

230027 - CCAV - Audiovisual Coding

(ENG) Tema 5. Codificació d'imatge	Learning time: 18h Theory classes: 8h Laboratory classes: 2h Self study : 8h
Description:	
(ENG) Tema 6. Codificació de vídeo	Learning time: 22h Theory classes: 10h Laboratory classes: 2h Self study : 10h
Description:	
title english	Learning time: 64h Theory classes: 4h Self study : 60h
Description:	

230027 - CCAV - Audiovisual Coding

Planning of activities

(ENG) Pràctica de laboratori	Hours: 2h Laboratory classes: 2h
(ENG) Pràctica de laboratori	Hours: 2h Laboratory classes: 2h
(ENG) Pràctica de laboratori	Hours: 2h Laboratory classes: 2h
(ENG) Pràctica de laboratori	Hours: 2h Laboratory classes: 2h
(ENG) Pràctica de laboratori	Hours: 2h Laboratory classes: 2h
(ENG) Proves de resposta llarga (Examen Final)	Hours: 1h Theory classes: 1h

Regulations for carrying out activities

230027 - CCAV - Audiovisual Coding

Bibliography

Basic:

Bonafonte, A.; Marques, F. Apunts de l'assignatura.

Complementary:

Taubman, D.S.; Marcellin, M.W. JPEG2000: image compression fundamentals, standards and practice. Boston; Dordrecht; London: Kluwer Academic Publishers, 2002. ISBN 079237519X.

Bosi, M.; Goldberg, R.E. Introduction to digital audio coding and standards. Boston: Kluwer Academic Publishers, 2003. ISBN 1402073577.

Chu, Wai C. Speech Coding Algorithms: Foundation and Evolution of Standardized Coders. 1. Wiley Science, 2003. ISBN 0471373125.

Dutoit, T.; Marques, F. Applied signal processing: a MATLAB-based proof of concept. New York: Springer, 2009. ISBN 9780387745343.