UNIVERSIDAD DE CASTILLA - LA MANCHA
GUÍA DOCENTE

1. General information

Course: COMMUNICATION TECHNOLOGIES

Type: CORE COURSE

Degree: 401 - UNDERGRADUATE DEGREE PROGRAMME IN AUDIOVISUAL COMMUNICATION

Center: 12 - FACULTY OF COMMUNICATION

Year: 1

Main language: Spanish

Use of additional languages:

Web site:

Code: 16504

ECTS credits: 6

Academic year: 2021-22

Group(s): 30 31

Duration: First semester

Second language:

English Friendly: Y

Bilingual: N

Lecturer: **ARTURO MARTINEZ RODRIGO** - Group(s): **30 31**

Building/Office	Department	Phone number	Email	Office hours
Facultad de Comunicación	SISTEMAS INFORMÁTICOS	4862	Arturo.Martinez@uclm.es	They will be presented on the virtual campus at the beginning of the course

2. Pre-Requisites

There are no prerequisites.

3. Justification in the curriculum, relation to other subjects and to the profession

The development of new communication technologies is advancing at an unprecedented and frenetic pace. Its impact on the world of communication is crucial to find out the new communicative social practices and the new uses of information. For this reason, it is vital that future communication professionals advance hand in hand with new technologies and are in possession of the knowledge and training that enables them as creators of content and information through vertiginous technical evolution, to serve the plural society in which they will have to work.

4. Degree competences achieved in this course

Course competences

Code	Description
CB05	Develop the learning skills necessary to undertake further studies with a high degree of autonomy.
CE17	Install, configure and maintain interactive multimedia web platforms for audio and video distribution.
CE18	Select and use technological tools for the creation of multimedia digital material, animations, virtual sets and interactive contents
CE19	Know the technologies for the storage, transmission and reception of audiovisual content, especially in digital systems and mobile.
CG02	Develop creativity to take risks in the definition of research or creative topics from an innovative perspective that contributes to the knowledge, interpretation or development of audiovisual languages and/or formats.
CG03	Use the basic tools of information and communication technologies necessary for the exercise of professions linked to audiovisual communication.
CG04	Expose the results of academic work in writing, orally or by other means, in accordance with the canons of the communication disciplines.
CG05	Know the constitutional values, ethical principles and deontological rules applying to audiovisual communication.
CG06	Know the state of the world and its recent historical evolution as well as acquiring the concepts necessary for understanding its political, economic, technological and sociocultural dimensions in such a way that they serve as an instrument in the resolution of professional problems and challenges.
CG07	Acquire the ability to work in a team, face collective challenges and cooperatively solve problems, respecting the diversity of the participants and of their contributions.
CT01	Learn a second foreign language.

5. Objectives or Learning Outcomes

Course learning outcomes

Description

Understand and use the web and cloud storage technologies for the dissemination of audiovisual and interactive content.

Know the equipment and techniques for recording and editing audiovisual events.

Know the conceptualisation of the discursive genres of reportage and documentary as well as transmedia production, differentiating their peculiarities and historical developments.

Sort and structure the available information and plan the problem-solving process.

Manipulate social media and new technologies at user level with special emphasis on communicative work.

Use computer techniques for the manipulation of the audiovisual signal.

Adapt to constant technological change.

6. Units / Contents

Unit 1: Communication and Information Technologies. From analog to digital field.

Unit 1.1 Concept of information and signal.

Unit 1.2 Characteristics of a signal: amplitude, period and phase.

Unit 1.3 Representation of signals in time and frequency: spectrogram.

Unit 1.4 Concept of bandwidth and frequency filters.

Unit 1.5 Analog signals vs. digital signals.

Unit 1.6 The analog-digital converter: sampling, quantification and coding.

Unit 1.7 The decimal and binary coding system.

Unit 1.8 PRACTICE 1. The digital signal applied to the audiovisual environment.

Unit 2: TICs applied to audiovisual systems.

Unit 2.1 The digital image: concept of pixel and dixel.

Unit 2.2 Resolution and size of a digital image.

Unit 2.3 Digitization of an image: sampling and quantification.

Unit 2.4 Color depth.

Unit 2.5 Bitmap images vs. vector images.

Unit 2.6 Color modes.

Unit 2.7 PRACTICE2: Image and video in Social Media. Multimedia content.

Unit 3: Informatics, communication networks and the Internet.

Unit 3.1 What is a computer network?

Unit 3.2 Brief history of the Internet: from ARPANET to the present.

Unit 3.3 Types of networks according to their extension: LAN, MAN and WAN.

Unit 3.4 Communication between computers: the TCP / IP protocol.

Unit 3.5 Connection between computer networks: switch, hub and router.

Unit 3.6 DNS servers, domains and URLs.

Unit 3.7 Client-server architecture.

Unit 3.8 The HTTP protocol.

Unit 4: New information technologies: Web 2.0 and Digital Media.

Unit 4.1 What is the social Web?

Unit 4.2 Web 1.0 vs. Web 2.0

Unit 4.3 Characteristics of Web 2.0.

Unit 4.4 Web 2.0 tools: from the Blog and Wiki to social networks.

Unit 4.5 The future of Web 2.0: the semantic Web.

Unit 4.6 PRACTICE 3. Computer tools on the web for Content Management Systems (CMS)

Unit 5: Fundamentals of the storage and distribution of audiovisual content.

Unit 5.1 How do we store the audiovisual signal ?. Digital supports, connectors and cables.

Unit 5.2 Information compression.

Unit 5.3 Video and audio formats.

Unit 5.4 The distribution of the audiovisual signal over the internet: streaming broadcast. Principles and operation.

Unit 5.5 The distribution of the audiovisual signal by radio frequency.

Unit 5.6 The distribution of the audiovisual signal by satellite.

7. Activities, Units/Modules and Methodology

Training Activity	Methodology	Related Competences (only degrees before RD 822/2021)	ECTS	Hours	As	Com	Description
Class Attendance (theory) [ON-SITE]	Lectures	CB05 CE18 CE19 CG05 CG06	0.88	22	N	-	
Class Attendance (practical) [ON-SITE]	Practical or hands-on activities	CE17 CE18 CG02 CG03 CG04 CG07	1.08	27	N	-	
Group tutoring sessions [ON-SITE]	Group tutoring sessions	CG07	0.16	4	N	-	
Progress test [ON-SITE]	Assessment tests	CB05 CE18 CE19 CG04 CG05 CG06 CT01	0.12	3	Y	Y	
Practicum and practical activities report writing or preparation [OFF-SITE]	Guided or supervised work	CE19	2.4	60	Y	Y	
Study and Exam Preparation [OFF-SITE]	Self-study	CT01	1.2	30	N	-	
Final test [ON-SITE]	Assessment tests	CG04	0.16	4	Y	Y	
Total:			**6**	**150**			
Total credits of in-class work: 2.4				**Total class time hours: 60**			
Total credits of out of class work: 3.6				**Total hours of out of class work: 90**			

As: Assessable training activity

Com: Training activity of compulsory overcoming (It will be essential to overcome both continuous and non-continuous assessment).

8. Evaluation criteria and Grading System

Evaluation System	Continuous assessment	Non-continuous evaluation*	Description
Final test	0.00%	50.00%	
Practicum and practical activities reports assessment	50.00%	50.00%	Evaluation and defense of the reports, from the different practices proposed throughout the course.
Progress Tests	50.00%	0.00%	Evaluation of the progress tests that will be performed

	Total:	100.00%	100.00%	throughout the course.

According to art. 4 of the UCLM Student Evaluation Regulations, it must be provided to students who cannot regularly attend face-to-face training activities the passing of the subject, having the right (art. 12.2) to be globally graded, in 2 annual calls per subject , an ordinary and an extraordinary one (evaluating 100% of the competences).

Evaluation criteria for the final exam:

Continuous assessment:

- To pass the course, it is necessary to score at least a 5 on average taking into account all the evaluable items and their weightings.

- It is necessary to obtain a minimum grade of 4 in the average grade of the two theory partial exams (there is no minimum grade for each part) and in the average grade of practices to be able to pass the course, as long as the imposed premise is met in the previous evaluation criterion.

Non-continuous evaluation:

- To pass the course, it is necessary to score at least a 5 on average taking into account all the evaluable items and their weightings.

- It is necessary to obtain a minimum mark of 4 in the final theory exam and in the average mark of practices to be able to pass the course, as long as the premise imposed in the previous evaluation criteria is met.

Specifications for the resit/retake exam:

- Progress tests will be pass through a final exam carried out during the official schedule of extraordinary call, determined by the Faculty.

- In case of failing the practices, only those ones that are failed will be resubmitted, and they will be defended by taking a practice exam in the official schedule of extraordinary announcement determined by the Faculty.

- In case of failing the extraordinary call, and having more than a 5 in the average of practices, the grade (only of practices) will be saved exclusively for the following course.

Specifications for the second resit / retake exam:

- The same ones that in the extraordinary call.

9. Assignments, course calendar and important dates	
Not related to the syllabus/contents	
Hours	**hours**
Group tutoring sessions [PRESENCIAL][Group tutoring sessions]	4
Progress test [PRESENCIAL][Assessment tests]	3
Final test [PRESENCIAL][Assessment tests]	4
Unit 1 (de 5): Communication and Information Technologies. From analog to digital field.	
Activities	**Hours**
Class Attendance (theory) [PRESENCIAL][Lectures]	5
Class Attendance (practical) [PRESENCIAL][Practical or hands-on activities]	5
Practicum and practical activities report writing or preparation [AUTÓNOMA][Guided or supervised work]	20
Study and Exam Preparation [AUTÓNOMA][Self-study]	6
Unit 2 (de 5): TICs applied to audiovisual systems.	
Activities	**Hours**
Class Attendance (theory) [PRESENCIAL][Lectures]	5
Class Attendance (practical) [PRESENCIAL][Practical or hands-on activities]	5
Practicum and practical activities report writing or preparation [AUTÓNOMA][Guided or supervised work]	20
Study and Exam Preparation [AUTÓNOMA][Self-study]	6
Unit 3 (de 5): Informatics, communication networks and the Internet.	
Activities	**Hours**
Class Attendance (theory) [PRESENCIAL][Lectures]	4
Class Attendance (practical) [PRESENCIAL][Practical or hands-on activities]	5
Study and Exam Preparation [AUTÓNOMA][Self-study]	6
Unit 4 (de 5): New information technologies: Web 2.0 and Digital Media.	
Activities	**Hours**
Class Attendance (theory) [PRESENCIAL][Lectures]	4
Class Attendance (practical) [PRESENCIAL][Practical or hands-on activities]	6
Practicum and practical activities report writing or preparation [AUTÓNOMA][Guided or supervised work]	20
Study and Exam Preparation [AUTÓNOMA][Self-study]	6
Unit 5 (de 5): Fundamentals of the storage and distribution of audiovisual content.	
Activities	**Hours**
Class Attendance (theory) [PRESENCIAL][Lectures]	4
Class Attendance (practical) [PRESENCIAL][Practical or hands-on activities]	6
Study and Exam Preparation [AUTÓNOMA][Self-study]	6
Global activity	
Activities	**hours**
Class Attendance (theory) [PRESENCIAL][Lectures]	22
Study and Exam Preparation [AUTÓNOMA][Self-study]	30
Practicum and practical activities report writing or preparation [AUTÓNOMA][Guided or supervised work]	60
Class Attendance (practical) [PRESENCIAL][Practical or hands-on activities]	27
Group tutoring sessions [PRESENCIAL][Group tutoring sessions]	4
Progress test [PRESENCIAL][Assessment tests]	3
Final test [PRESENCIAL][Assessment tests]	4
	Total horas: 150

10. Bibliography and Sources

Author(s)	Title/Link	Publishing house	Citv	ISBN	Year	Description
Rodriguez Alonso, H.	Imagen Digital Conceptos Basicos (BIT & PIXEL)	Marcombo		978-8426719065	2013	
Rodríguez Herrera, D.	Ceros y unos: La increíble historia de la informática, internet y los videojuegos (Ensayo)	Ciudadela Libros		978-8496836808	2011	
Gómez del Pozuelo, N.	Por dónde empiezo 2.0: Consejos básicos para tener una adecuada presencia en la red (Gestión del conocimiento)	Editorial Empresa Activa, col. Gestión del conocimiento.		978-8492452859	2011	