Universitat Autònoma de Barcelona

2021/2022

Information and Communication Technologies

Code: 103841
ECTS Credits: 6

Degree	Type	Year	Semester
2501928 Audiovisual Communication	FB	2	1

The proposed teaching and assessment methodology that appear in the guide may be subject to changes as a result of the restrictions to face-to-face class attendance imposed by the health authorities.

Contact

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Use of Languages

Principal working language: catalan (cat)
Some groups entirely in English: No
Some groups entirely in Catalan: Yes
Some groups entirely in Spanish: No

Teachers

Joan Vila Triadú
Ludovico Longhi

Prerequisites

To take this course requires a basic ability to understand concepts of physics and reading comprehension of English.

Objectives and Contextualisation

This course is part of the subject "Communication", which also includes the subjects of History of Communication, Written and Audiovisual Communication Languages, Structure of Communication and Communication Theories.

Therefore, the subject fits into the group of basic subjects related to communication, all of them with 6 credits.

The aim of this subject is to provide the basic keys to interpreting technologies and their role in society. It is an in-depth and at the same time theoretical introduction, to give the basis for reflection on technology, once the more practical subject of Technologies in Audiovisual Communication has been taught in the first year, first semester. The subject of Information and Communication Technologies is the natural continuation.

The objective of this course, as defined in the curricula, is the study of the technologies associated with the development of the information and knowledge society, considering especially their impact on innovation and on the creation of socio-cultural environments. The aim is to reflect on the role of technologies in society, citizens and the audiovisual industry.

Specifically, the objectives of the course are:

- To know and identify the main theoretical discourses on technology.
- To know the main concepts related to audiovisual technology.

- To know, identify and analyze the advantages and disadvantages of each technology related to the audiovisual transmission and reception.
- To reflect critically on the technological discourse and the application of the information and audiovisual communication technologies.

Competences

- Demonstrate a critical and self-critical capacity.
- Demonstrate a self-learning and self-demanding capacity to ensure an efficient job.
- Develop autonomous learning strategies.
- Develop critical thinking and reasoning and be able to relay ideas effectively in Catalan, Spanish and a third language.
- Differentiate the disciplines main theories, fields, conceptual developments, as well as their value for professional practice.
- Manage time effectively.
- Master the technologies and languages characteristic of audiovisual communication, and those associated with discourse building.
- Research, select and arrange in hierarchical order any kind of source and useful document to develop communication products.
- Rigorously apply scientific thinking.

Learning Outcomes

1. Apply the principles and techniques of discourse building.
2. Demonstrate a critical and self-critical capacity.
3. Demonstrate a self-learning and self-demanding capacity to ensure an efficient job.
4. Develop autonomous learning strategies.
5. Develop critical thinking and reasoning and be able to relay ideas effectively in Catalan, Spanish and a third language.
6. Identify the fundamental principles of audiovisual languages.
7. Identify the fundamental principles of audiovisual technology.
8. Identify the structural foundations of the audiovisual system.
9. Manage time effectively.
10. Research, select and arrange in hierarchical order any kind of source and useful document to develop communication products.
11. Rigorously apply scientific thinking.

Content

1. Conceptual introduction to ICT

What do we understand by Information and Communication Technologies? Data / Information / Knowledge.

2. The technological discourse

Approach to the main currents that have studied technology from various points of view, with special attention to the determinist and constructivist discourse.

3. Technologies' life cycle

Analysis of the life cycle of technologies to better understand their evolution and possible disappearance. Idea of planned obsolescence.

4. Innovation difussion

Approach to innovation and its dissemination, with special attention to the proposal of Everett M. Rogers.

5. Electromagnetic and radioelectric spectrum: principles and management

The importance of the radioelectric spectrum as a platform for disseminating content in communication.

6. The technological discourse of the Information Society

The Information Society, and its discourses: which part is based on technology and its importance for society.

7. The logic of standardization of technical systems

How technological standards are an economic and political objective and shape technology.

8. Transmission systems

Main forms of audio and video distribution, not so much from a technical perspective as its advantages and disadvantages.

Methodology

This year the teaching of this subject will be taught in a semi-face-to-face way. The theory will be virtual and the seminars and tutorials face-to-face. Specifically, the acquisition of knowledge and skills by students will be done through various methodological procedures that include online classes, material readings and seminars, as well as textual and audiovisual supporting materials available through the Virtual Campus. .

Specifically, seminars will be held on specific topics of the agenda in small groups where a series of readings will be provided.

Finally there will be a group dissertation related to specific cases of social impact of technology.

The calendar detailed with the content of the different sessions will be presented on the day of presentation of the subject. It will be uploaded to the Virtual Campus, where students will also be able to access the detailed description of the exercises and practices, the various teaching materials, and any necessary information for the proper follow-up of the subject.

The proposed teaching methodology and evaluation activities may undergo some modifications depending on the health authorities' attendance restrictions.

Annotation: Within the schedule set by the centre or degree programme, 15 minutes of one class will be reserved for students to evaluate their lecturers and their courses or modules through questionnaires.

Activities

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
Seminars	18	0.72	
Theoretical lessons	34.5	1.38	
Type: Supervised			
Mentoring	7.5	0.3	
Type: Autonomous			
Reading, analysis and synthesis of texts, preparation and implementation of work	82.5	3.3	

Assessment

The final qualification is made up of three different parts, each of which must be approved with a minimum of 5 to pass the subject:

Group dissertation (50%)
Theoretical exam (30%)
Seminars (20%)

The work is an activity carried out in a group that will be supervised in scheduled sessions. Students must demonstrate the ability to critically read contemporary technological discourse, relating the theory of the subject with specific cases. At the beginning of the course, the protocol specifying in detail how to proceed will be posted on the virtual campus.

The theoretical exam will be ask about the theoretical lecturers, the seminars and the compulsory readings.

The intervention in the seminars will be articulated based on the guidelines that will be provided and posted on the Virtual Campus. Each seminar has a protocol and some specific readings that are known in advance. They must be prepared in advance and they will work on exercises and / or group and / or individual presentations. The absences of attendance to the seminars will be graded with a 0. At the beginning of the course the dates of the semesters will be published.

About the period and conditions of revaluation

The student will be entitled to the revaluation of the exam and of the work or of both parties as long as it has been evaluated in 2/3 parts of the total grade of the subject.

To have access to reavalutaion of the group dissertation and / or the exam, the previous grades should be an average of 3.5.

The activities that are excluded from the reavaluation process are the seminars.

About plagiarism

The student who performs any irregularity (copy, plagiarism, identity theft...) that can lead to a significant variation of the qualification of an evaluation act, will be qualified with 0 this act of evaluation. In case there are several irregularities, the final grade of the subject will be 0.

Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Evaluation test	30%	4	0.16	11, 1, 10, 3, 4, 2, 5, 9, 7, 8
Seminars	20%	1.5	0.06	11, 1, 10, 3, 4, 2, 5, 9, 7, 8, 6
Theorical work	50%	2	0.08	11, 1, 10, 3, 4, 2, 5, 9, 7, 8, 6

Bibliography

Compulsory reading:

- Fernández-Quijada, David. 2011. *Medi@TIC. Anàlisi de casos de tecnologia i mitjans*. Barcelona: Editorial UOC.

Reading list:

- Anderson, Philip i Tushman, Michael (1990) "Technological Discontinuities and Dominant Designs: A Cyclical Model of Technological Change", *Administrative Science Quarterly*, 35(4): 604-633.
- Balbi, Gabriele i Paolo Maggauda (2018). *A history of digital media*. Londres: Routledge.
- Bijker, Wiebe E., Hughes, Thomas P. i Pinch, Trevor J. (eds.) (1989) *The Social construction of technological systems: new directions in the sociology and history of technology*. Cambridge (EUA): MIT Press.
- Bonet, Montse (2016). *El imperio del aire: espectro radioeléctrico y radiodifusión.* Barcelona: Editoirial UOC.
- Buckland, Michael Keeble (2017). *Information and Society.*Cambridge: MIT Press.
- Carey, John i Martin C.J. Elton (2010) *When Media are New: Understanding the Dynamics of New Media Adoption and Use*. Ann Arbor: University of Michigan Press.
- Christensen, Clayton M. (2016). *The innovator's dilemma: when new technologies cause great firms to fail*, Boston, Massachusetts: Harvard Business Review Press.
- Diamond, Jared (2006). *Armas, gérmenes y acero: breve historia de la humanidad en los últimos trece mil años, [Barcelona]: Debate.*
- Henderson, Rebecca M. i Clark, Kim B. (1990) "Architectural Innovation: The Reconfiguration of Existing Product Technologies and the Failure of Established Firms", *Administrative Science Quarterly*, 35(1): 9-30.
- Lee, Kai Fu (2018) *AI Superpowers: China, Silicon Valley, and the New World Order*. Boston: Houghton MifflinHarcourt.
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- Lehman-Wilzig, Sam i Cohen-Avigdor, Nava. (2004) "The natural life cycle of new media evolution: Inter-media struggle for survival in the internet age", *New Media & Society*, 6(6): 707-730.
- Lievrouw, Leah A. i Livingstone, Sonia. (eds.) (2002) *Handbook of new media: social shaping and consequences of ICTs*.London: Sage.
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- Morozov, Evgeny, (2014). *To save everything, click her: the folly of technological solutionism*, New York: PublicAffairs
- Mueller, Milton (2017). Will the Internet fragment? : sovereignty, globalization and cyberspace. Cambridge, Polity Press.
- Niqui, Cinto. (2014) *Los primeros 20 años de contenidos audiovisuales en internet.* (E-PUB, llibre electrònic). Barcelona: Editorial UOC.
- Niqui,Cinto. (2011) *Fonaments i usos de tecnologia audiovisual digital* (E-PUB, llibre electrònic). Barcelona: Editorial UOC.
- Quintanilla, Miguel Ángel et al (2020). *Tecnologias entrañables*. Madrid: Catarata.
- Raynaud, Dominique (2018). *¿Qué es la tecnologia?* Pamplona: Laeoti.
- Rogers, Everett M. (2003) *Diffusion of Innovations*, 5a ed. New York: Free Press.
- Schmidt, Eric & Cohen, Jared (2014). *El Futuro digital*, Madrid: Anaya Multimedia.
- Scolari, Carlos (2008). *Hipermediaciones. Elementos para una Teoría de la Comunicación Digital Interactiva*, Barcelona: Gedisa.
- Wu, Tim (2011). *The Master switch: the rise and fall of information empires*, New York, N.Y.: Vintage Books.

Software

None.