Universitat Autònoma de Barcelona

2019/2020

Information and Communication Technologies

Code: 103852
ECTS Credits: 6

Degree	Type	Year	Semester
2501933 Journalism	FB	2	1

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

Josep Àngel Guimerà Orts

Prerequisites

A good level of English reading comprehension is required. Previous degree content is taken for granted.

Objectives and Contextualisation

This subject is located within the Communication domain, taught in the first and second year of the degree. Therefore, it has 6 ECTS credits and implies a basic formation with other subjects as History of the Communication, Structure of the Communication, Audiovisual and Written Languages and Communication Theories.

Therefore, the subject fits into the group of specific subjects related to communication. The objective is to provide the basic keys for the interpretation of technologies and their role in society. It is a deep and theoretical introduction to build up the bases of thinking to future subjects.

As defined in the syllabus, the objective of this course is the study of technologies associated with the development of the information and knowledge society, especially considering its impact on innovation and the creation of socio-cultural environments . It is about reflecting on the role of technologies in society and the communication industry, as well as its impact on citizen communication.

Specifically, the objectives of the subject are the following:

- Knowing the technical processes involved in the communication of audiovisual content
- Learning which are the main technological tools that intervene in these processes and the innovations that are taking place in this field, to see how this can influence the work of the communicator, the messages and their reception.
- Reflecting critically on the technological discourse and the application of information and communication technologies to journalistic and media work.

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 them effectively in Catalan, Spanish and a third language.
- Differentiate the disciplines main theories, its fields, conceptual developments, theoretical frameworks and approaches that underpin knowledge of the subject and its different areas and sub-areas, and acquire systematic knowledge of the medias structure.
- Manage time effectively.
- Research, select and arrange in hierarchical order any kind of source and useful document to develop communication products.
- Respect the diversity and plurality of ideas, people and situations.
- Rigorously apply scientific thinking.

Learning Outcomes

1. Demonstrate a critical and self-critical capacity.
2. Demonstrate a self-learning and self-demanding capacity to ensure an efficient job.
3. Develop autonomous learning strategies.
4. Develop critical thinking and reasoning and be able to relay them effectively in Catalan, Spanish and a third language.
5. Link social analysis and impacts of new communication technologies.
6. Manage time effectively.
7. Research, select and arrange in hierarchical order any kind of source and useful document to develop communication products.
8. Respect the diversity and plurality of ideas, people and situations.
9. 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

The acquisition of knowledge and skills by students will be done through various methodological procedures that include master classes in the classroom, discussion and reflection exercises proposed by the teacher, readings and seminars. There will be textual materials and audiovisual support available through the Virtual Campus.
Specifically, six 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.

Activities

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
Lectures	37.5	1.5	
Seminars	15	0.6	
Type: Supervised			
Tutorials	7.5	0.3	
Type: Autonomous			
Readings, analysis, preparation and writing of the group dissertation	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 (40%)
Theoretical exam (40%)
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
Group dissertation	20%	3.5	0.14	9, 7, 2, 3, 1, 4, 6, 5, 8
Seminars	20%	1	0.04	9, 7, 2, 3, 1, 4, 6, 5, 8
Theoretical Exam	40%	3	0.12	9, 4, 6, 5

Bibliography

Compulsory Reading:

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

Reading list:

- Anderson, Philip y Tushman, Michael (1990) "Technological Discontinuities and Dominant Designs: A Cyclical Model of Technological Change", *Administrative Science Quarterly*, 35(4): 604-633.
- Balbi, Gabriele y Paolo Maggauda (2018). *A history of digital media*. Londres: Routledge.
- Bijker, Wiebe E., Hughes, Thomas P. y 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 y 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. y 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.
- Lax, Stephen (2009) *Media and Communication Technologies. A Critical Introduction*, Basingstoke: Palgrave Macmillan.
- 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. y Livingstone, Sonia. (eds.) (2002) *Handbook of new media: social shaping and consequences of ICTs*. London: Sage.
- McLuhan, Marshall (1996) *Comprender los medios de comunicación. Las extensiones del ser humano*. Barcelona: Paidós (original de 1964).
- Morozov, Evgeny, (2014). *To save everything, click her: the folly of technological solutionism*, New York: PublicAffairs
- 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.
- 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.