

## Ethics of Contemporary Challenges

Code: 106234  
ECTS Credits: 6

**2025/2026**

Degree	Type	Year
Science, Technology and Humanities	OB	2

### Contact

Name: Francesc Xavier Roque Rodriguez

Email: xavier.roque@uab.cat

### Teachers

(External) Carmen Madorrán Ayerra

(External) José María Carrascosa Baena

### Teaching groups languages

You can view this information at the [end](#) of this document.

### Prerequisites

There are none.

### Objectives and Contextualisation

At the end of the course students should achieve the following objectives:

- Identify, analyze and critically evaluate problems derived from the scientific and technological activity as well as its relevant moral, ecological and social issues.
- Communicate in an effective way, both oral and written, the result of the analysis of the ecological, ethical and social dimensions of science and Technology (of both its research and development, and its applications).
- Know the main moral challenges associated to research, the use and the consequences of science and technology in our contemporary societies.

### Competences

- Act with ethical responsibility and respect for fundamental rights and duties, diversity and democratic values.
- Apply knowledge of ethics to science in society and gauge the impact of technological change on people and the human condition.

- Develop and evaluate interdisciplinary projects that combine scientific, technological and humanistic knowledge and encourage citizens' involvement in matters related to science and technology in society.
- Explain the basic concepts related to life, its origin and evolution, especially those referring to health and illness throughout history.
- Innovate in the methods and processes of this area of knowledge in response to the needs and wishes of society.
- Students must be capable of collecting and interpreting relevant data (usually within their area of study) in order to make statements that reflect social, scientific or ethical relevant issues.
- Students must be capable of communicating information, ideas, problems and solutions to both specialised and non-specialised audiences.
- Students must have and understand knowledge of an area of study built on the basis of general secondary education, and while it relies on some advanced textbooks it also includes some aspects coming from the forefront of its field of study.
- Work collaboratively in teams.

## Learning Outcomes

1. Assess possible alternatives to animal experimentation.
2. Critically evaluate different ethical challenges in today's world.
3. Develop projects on the ethics of contemporary science and technology.
4. Identify the functions of research ethics committees.
5. Intervene in debates on ethical dilemmas associated with scientific developments.
6. Know the basic principles of risk management.
7. Know the biophysical limits of planet Earth.
8. Know the concept of transhumanism.
9. Know the directives on personal data protection.
10. Know the principles of environmental (principle of precaution, etc.).
11. Present reports on ethical dilemmas associated with specific scientific developments.
12. Produce papers as part of a group.

## Content

1. Fundamentals: environmental ethics and Third Culture
2. Bioethical Issues
3. Needs, capabilities and basic goods (in a finite planet)
4. Moral and political challenges of transhumanism
5. Moral challenges of scientific-technological research (robotics and AI)
6. Moral challenges of biomedical research (genomic edition, transhumanism)

## Activities and Methodology

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
Learning exercises	16	0.64	7, 6, 10, 9, 3, 12, 5, 11, 2
Lectures	33	1.32	8, 7, 6, 10, 9, 4, 2, 1
Type: Supervised			
Essay supervision	4.25	0.17	8, 7, 10, 11, 2, 1

Type: Autonomous

Bibliographic research	20	0.8	8, 7, 10, 3, 1
Personal study	33	1.32	8, 7, 10
Work on presentation	6.25	0.25	3, 12, 5, 11
Writing of essay	35	1.4	8, 7, 11, 2

Lectures.

Text discussion seminars.

Team work and oral presentations.

Individual written essay.

Exam.

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.

## Assessment

### Continuous Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Essay	30%	0	0	8, 7, 11, 2
Exam	30%	2	0.08	8, 7, 6, 10, 9, 4, 11, 2, 1
Participation	10%	0	0	12
Presentation	30%	0.5	0.02	3, 12, 5, 11

Oral presentation of team work and assessable ppt.

Individual written essay on assigned topic.

Exam.

Participation.

There will be a reevaluation exam. To be reevaluated, the student must have been evaluated in a set of activities whose weight equals to a minimum of two thirds of the total grade of the subject (continuous evaluation) or have completed all the required assessment activities (single assessment). The student will be deemed Not available if he/she has not submitted at least 30% of the assessment activities.

In the event of a student committing any irregularity that may lead to a significant variation in the grade awarded to an assessment activity, the student will be given a zero for this activity, regardless of any disciplinary process that may take place. In the event of several irregularities in assessment activities of the same subject, the student will be given a zero as the final grade for this subject.

Single assessment

This subject does not incorporate single assessment.

This subject allows the use of AI technologies exclusively for support tasks such as [bibliographic or content-based searches, text correction or translations, where applicable]. Other specific situations may be

contemplated, as deemed appropriate by the teacher. The student must clearly (i) identify which parts have been generated using AI technology; (ii) specify the tools used; and (iii) include a critical reflection on how these have influenced the process and final outcome of the activity. Lack of transparency regarding the use of AI in the assessed activity will be considered academic dishonesty; the corresponding grade may be lowered, or the work may even be awarded a zero. In cases of greater infringement, more serious action may be taken.

## Bibliography

Diamond, J. Crisis. *Como reaccionan los países en los momentos decisivos*. Barcelona: Debate, 2019.

Harari, Y. N. *21 lecciones para el siglo XXI*. Barcelona: Debate, 2018.

Martinez Alier, J. 2004. *El ecologismo de los pobres. Conflictos ambientales y lenguajes de valoración*. Barcelona: Icaria, 2004.

Martinez Alier, J.; Wagensberg, J. *Solo tenemos un planeta. Sobre la armonía de los humanos con la naturaleza*. Barcelona: Icaria, 2017.

Molles, M. 2006. *Ecología. Conceptos y aplicaciones*. Nueva York: McGraw-Hill-Interamericana, 2006.

Anders, Günther; Eichmann, Klaus. *Nosotros, los hijos de Eichmann: carta abierta a Klaus Eichmann*. Barcelona: Paidós, 2001.

Baggini, Julian. *Breve historia de la verdad*. Barcelona: Ático de los Libros, 2018.

Fernández Buey, Francisco. *Para la Tercera Cultura*. Barcelona: El Viejo Topo, 2012.

Garcés, Marina. *Nueva Ilustración radical*. Barcelona: Anagrama, 2017. Versión en catalán: Nova Il·lustració radical, Barcelona: Anagrama, 2017

Winner, Langdon. *La ballena y el reactor: una búsqueda de los límites en la era de la alta tecnología*. Barcelona: Gedisa, 1987.

Jasanoff, Sheila. *The Ethics of Invention*. New York: Norton & Co, 2016.

Parens Erik; Johnston, Josephine, eds. *Human flourishing in the age of gene editing*. New York: Oxford University Press, 2019.

Hockfield, Susan. *The Age of Living Machine*. London: Norton & Co, 2019.

National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research U.S.A. *El Informe Belmont*.

<https://www.bioeticaweb.com/el-informe-belmont-principios-y-guías-acticas-para-la-protección-de-los-sujetos-1>

## Additional references

Blackburn, Simon. *La verdad-guía de perplejos*. Barcelona: Crítica, 2005.

Castoriadis, Cornelius. *Sujeto y verdad en el mundo histórico-social*. Seminarios 1986-1987. *La creación humana*, I. Buenos Aires: Fondo de Cultura Económica de Argentina, 2004.

Castoriadis, Cornelius; Cohn-Bendit, Daniel. *De la ecología a la autonomía*. Barcelona: Mascarón, 1982.

Castro, Carlos de. *Reencontrando a Gaia*. Málaga: Eds. del Genal, 2019.

Illich, Ivan. *La convivencialidad*. Barcelona: Virus, 2012.

Mumford, Lewis. *El pentágono del poder. El mito de la máquina* (vol. 2). Logroño: Pepitas de Calabaza, 2011.

Naredo, José Manuel. *Raíces económicas del deterioro ecológico y social*. Madrid: Siglo XXI, 2006.

Riechmann, Jorge. *Ética extramuros*. Madrid: Ediciones UAM, 2016.

Riechmann, Jorge; Tickner, Joel y otros. *El principio de precaución*. Barcelona: Icaria, 2002.

Welsch, Wolfgang. *Hombre y mundo. Filosofía en perspectiva evolucionista*. Valencia: Pre-Textos, 2014.

## Software

None required.

## Groups and Languages

Please note that this information is provisional until 30 November 2025. You can check it through this [link](#). To consult the language you will need to enter the CODE of the subject.

Name	Group	Language	Semester	Turn
(PAUL) Classroom practices	20	Spanish	second semester	morning-mixed
(TE) Theory	20	Spanish	second semester	morning-mixed