

Degree	Type	Year
Microbiology	OP	4

Contact

Name: Marta Martin Flix

Email: marta.martin@uab.cat

Teaching groups languages

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

Prerequisites

There are no prerequisites for taking this subject, but it is recommended that students have basic prior knowledge of basic and advanced research and techniques in the field of biology, biosciences and biomedicine. It is also important that students have a good level of English that allows them to take advantage of the bibliography, websites and reports provided in this language. Finally, it is important that students in this subject show an open, participatory, dialogic, respectful and curious disposition during learning activities.

Objectives and Contextualisation

The training objectives are for students to be able to:

- Understand and apply the basic principles of bioethics.
- Explain the social perception of science and technology and its importance in adequately communicating the achievements and risks associated with biomedical advances.
- Identify the problems arising from the progress and application of technology in human beings, genetics, and the beginning and end of life.
- Create an appropriate discussion space to facilitate the adoption of well-founded personal positions and possible consensus that allow for the evaluation of existing social conventions and their own moral convictions.
- Communicate effectively, both orally and in writing.
- Apply theoretical knowledge to practice.
- Assume an ethical commitment.
- Demonstrate sensitivity to environmental, health, social, and gender issues.

Learning Outcomes

1. CM21 (Competence) Plan research in the field of microbiology with ethical responsibility, gender perspective and respect for fundamental rights and duties and animal welfare.
2. KM33 (Knowledge) Define fundamental aspects of ethics applied to science and biosciences and the basic concepts and terminology related to standards or standards to ensure quality and principles of good laboratory practices.
3. SM31 (Skill) Manage computer tools, bibliography and internet resources for experimental design, as well as the search for information, regulations and guides on good practices in the field of microbiology.

Content

PART I. PRINCIPLES OF BIOETHICS

- Analysis in Bioethics
- Basic Principles in Bioethics
- Other Relevant Principles in Bioethics

PART II. ETHICS IN RESEARCH

- Ethical Principles in Scientific and Biomedical Practice
- Obligations of Researchers
- Codes of Good Practice in Research

PART III. THE ETHICAL DESIGN OF ANIMAL RESEARCH

- Ethical Aspects of Animal Research
- Basic Principles: The 3Rs
- Legal Aspects of the Use of Experimental Animals: Royal Decree 53/2013

PART IV. THE ETHICAL DESIGN OF HUMAN RESEARCH

- Ethical principles
- Subjects
- Legal aspects of research on human subjects, embryos, and reproductive cells: Law 3/2018, RD 1716/2011, Law 14/2007 and 14/2006

PART V: ETHICAL ASPECTS OF NEW TECHNOLOGIES

- Genetics, Genetic Engineering, and Biotechnology
- Reproductive medicine (Law 14/2007 and 14/2006)
- Research on embryos and reproductive cells
- Ethical dilemmas of donors, newborns, and parents
- New motherhood and parent-child relationships
- Embryo selection
- Gene editing

- Bioethics and genetic and health data (15/1999, Law 3/2028, Regulation 2016/679, Art. 5 Law 14/2007)
- Databases, wearables, applications, artificial intelligence
- Use of data: privacy and confidentiality

Activities and Methodology

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
Seminars	4	0.16	CM21, KM33, SM31, CM21
Theoretical lessons	18	0.72	KM33, SM31, KM33
Type: Supervised			
Case preparation for the Ethics & Bioethics Congress	16	0.64	CM21, KM33, SM31, CM21
Type: Autonomous			
Analysis and resolution of a practical case	4	0.16	SM31, SM31
Autonomous study	26	1.04	CM21, KM33, SM31, CM21

Theoretical classes and seminars will be held in this subject. The seminars are focused on working on a case that will be presented at an Interdisciplinary Ethics and Bioethics Congress, especially prepared for the students of this subject and students of the subject Social and Institutional Mediation for translators and interpreters, from the Translation and Interpretation degree (UAB).

In the development of the subject, 2 teaching methodologies will be applied: the theory classes will be lectures which, on occasion, will be combined with cooperative and thinking-based learning. In the seminars and during the preparation of the Congress, case-based learning (ABC) will be applied.

THEORY

The content of the theory program will be taught by the professor in the form of: (1) lectures with audiovisual support and (2) resolution of cases and simple practical exercises previously proposed by the professor to introduce and work on part or all of a topic. It is intended that these cases/exercises serve to: (i) consolidate the theoretical content and (ii) for students to develop the capacity for dialogue, reflection and critical thinking in the face of ethical and legal problems related to biomedical research. The presentations used in class will be previously available on the Virtual Campus.

It is not essential to expand the contents of the theory classes unless the teaching staff indicates otherwise, but it is advisable to regularly consult the bibliographic sources and websites recommended in the Bibliography section of the teaching guide.

In addition to attendance at classes, the proper functioning of the subject depends on the students having an active role, participating in the resolution of cases and practical exercises that arise related to the contents of the theory program. This type of work will be done in small groups in order to promote cooperative and thinking-based learning.

Students will have to work independently on the content of the legal texts referred to in this guide. Students will be provided with documents in which the complete text will appear and also an empty part of the normative text in order to facilitate this task.

SEMINARS and PREPARATION OF THE INTERDISCIPLINARY ETHICS AND BIOETHICS CONGRESS:

Students in this course will share seminars with students in the Social and Institutional Mediation for Translators and Interpreters course, from the Bachelor's Degree in Translation and Interpreting (UAB). The objective is to organize an Interdisciplinary Ethics and Bioethics Conference. Students from both courses will work together during two sessions, alternating between each Faculty (seminars). In these sessions, cases from each discipline will be discussed so that students become familiar with ethical dilemmas from other disciplines and interact with each other. The conference cases will then be presented, and interdisciplinary groups will be formed to debate, communicate, and reach consensus to analyze and resolve the case based on the knowledge acquired in each specialty. They will then be required to design a poster presentation of the case, as well as prepare an oral presentation. The presentation of the case at the conference will be given to the faculty of both courses and also to expert evaluators in ethics and bioethics, who will attend the conference and evaluate the presentations.

Note: 15 minutes of a class will be set aside, within the calendar established by the center/degree, for students to fill in the teacher performance and subject evaluation surveys /module.

USE OF AI: In this subject, the use of Artificial Intelligence (AI) technologies is permitted as an integral part of the assignment, provided that the final result reflects a significant contribution from the student in analysis and personal reflection. Students must clearly identify which sections were generated with this technology, specify the tools used, and include a critical reflection on how they influenced the process and final outcome of the assignment. Lack of transparency in the use of AI will be considered a breach of academic honesty and may result in a penalty on the assignment grade, or greater sanctions in serious cases.

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
Autonomous resolution of a practical case	15 %	1	0.04	KM33, SM31
Case presentation in group at the Ethics & Bioethics Congress	40 %	4	0.16	CM21, KM33, SM31
Theory exam	45 %	2	0.08	KM33

Single assessment system is not possible in this subject/module.

THEORY (45 %): To evaluate the theory there will be a test/short questions type-exam. The grade obtained in this exam will account for 45% of the subject grade. In order for the theory grade to be averaged with the rest of the subject grades, a minimum grade of 4 must be obtained. Students who obtain a grade lower than 4 in the theory exam will be able to do a recovery test. To be able to access recovery, students must have attended 67% of the scheduled assessment activities, considering as assessment activities: i) the theoretical content assessment test; ii) the seminars and iii) the Congress.

PRACTICAL CASE (15 %): Each student, individually, will have to solve a practical case in the field of bioethics. The grade obtained in the resolution of the case will account for 15% of the subject grade.

PARTICIPATION IN THE Interdisciplinary Ethics and Bioethics CONGRESS (40%): Students must attend the seminars, have a participatory attitude and present a case at the Interdisciplinary Ethics and Bioethics Congress. ATTENTION: attendance at the seminars and the presentation of a practical case at the Congress

is a MANDATORY and INDISPENSABLE requirement to pass the subject. The interdisciplinary groups that will be formed during the seminars will present their cases in poster format during the Congress. In addition to presenting the case, each group will have to answer the questions of the professors and the experts in ethics and bioethics who will also attend. The grade obtained in the presentation of the case to Congress will account for 40% of the subject grade.

GENERAL CONSIDERATIONS:

- Students who cannot attend an individual assessment test for a justified reason (such as a health problem, death of a relative up to the second degree, accident, enjoy the status of an elite athlete and have a competition or sports activity with compulsory attendance, etc.) and provide the official documentation corresponding to the teaching staff of the subject and the degree coordination (official medical certificate explicitly stating the inability to take an exam, police certificate, justification from the competent sports body, etc.), will have the right to take the test on another date. The coordination of the qualification will see to the realization of this, after consultation with the teaching staff of the subject.
- Students who have passed the theory exam, the practical case and the presentation at the congress will be able to take the exam to IMPROVE THEIR GRADE, and will be take another theory exam and will solve a new practical case. To opt to grade improvement, students must first renounce in writing (e-mail) to the grade previously obtained, notifying the professor responsible for the subject at least three days before the recovery exam. The grade that will be taken into account will be that of the last exam/case study you have completed.
- NON-ASSESSABLE: Students will receive the grade of non-assessable when they have attended less than 67% of the scheduled assessment activities, considering as assessment activities: i) the theoretical content assessment test ; ii) the seminars and iii) the Congress.

Bibliography

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Enllaços web:

Boletín Oficial del Estado: <http://www.boe.es/>

Berman Institute of Bioethics: <http://www.bioethicsinstitute.org/>

Clinical Trials: <http://www.clinicaltrials.gov/>

Comissió d'Ètica en Experimentació Animal i Humana de la UAB: <http://www.recerca.uab.es/ceeah/>

Observatori de Bioètica i Dret: <http://www.pcb.ub.es/bioeticaidret/>

Comité de Bioética de España: <http://www.comitedebioetica.es/>

Institut Borja de Bioètica: <http://www.ibbioetica.org/es/#&panel1-1>

Council of Europe. Steering Committee on Bioethics:
http://www.coe.int/t/dg3/healthbioethic/cdbi/default_en.asp

Fundació Grífols: <http://www.fundaciogrifols.org/es/web/fundacio/home>

Stanford Encyclopedia of Philosophy: <http://www.science.uva.nl/%7Eseop/>

The European Group on Ethics in Science and New Technologies:
<https://ec.europa.eu/research/egp/index.cfm>

The Hasting Center: <http://www.thehastingscenter.org/>

The Hinxton Group: <http://www.hinxtongroup.org/>

The Nuffield Council: <http://www.nuffieldbioethics.org/>

UNESCO. International Bioethics Committee:
<http://www.unesco.org/new/en/socialand-human-sciences/themes/bioethics/international-bioethics-committee/>

Software

There are no special programming needs for this subject.

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
(SEM) Seminars	741	Catalan	second semester	morning-mixed
(TE) Theory	74	Catalan	second semester	morning-mixed