

Degree	Type	Year
2500502 Microbiology	OT	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 that the students, at the end of the subject, are able to:

- Know and apply the basic principles of bioethics.
- Apply legal principles in the framework of the manipulation of biological systems.
- Apply the legal principles on research and development of bioproducts.
- Apply the principles of intellectual and industrial property law in the research and development processes of bioproducts.
- Expose what is the social perception of science and technology and its importance to adequately communicate the achievements and risks associated with biomedical advances, especially those related to microbiology.
- Know how to communicate effectively, both orally and in writing.
- Apply theoretical knowledge in practice.
- Assume an ethical commitment.
- Demonstrate sensitivity in environmental, health, social and gender perspective 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 practice
- Obligations of researchers
- Codes of Good Practice in Research
- Ethical principles of research in Biomedicine

PART III. THE ETHICAL DESIGN OF EXPERIMENTATION WITH ANIMALS

- Ethical aspects of animal research
- The basic principles: the 3Rs
- Legal aspects of the use of experimental animals: RD 53/2013

PART IV. THE ETHICAL DESIGN OF EXPERIMENTATION WITH HUMAN BEINGS

- Ethical principles
- The subjects
- Legal aspects of research on human beings, embryos and reproductive cells: Law 14/2007 and 14/2006

PART V: ETHICAL ASPECTS OF THE NEW TECHNOLOGIES

- Regenerative medicine
- Personalized medicine
- Reproductive medicine
- Genetic modification
- Genetic advice
- Genetic testing in people unable to consent

-Use of genetic information

-Patents

PART VI: OTHER LEGAL ASPECTS

-Law 15/1999 Law 9/2003

Part VII: PATENTS

-Intellectual and industrial property rights.

-Patents and utility models.

-Patents in chemistry, pharmacy and biotechnology.

-Drafting of the patent and infringement.

-Patent documentation.

Activities and Methodology

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

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:

The students of this subject will share the seminars with students of the Social and Institutional Mediation subject for translators and interpreters, from the degree in Translation and Interpretation (UAB). The aim of this interaction is to organize an Interdisciplinary Ethics and Bioethics Congress. The students of the two subjects will work together for three or four sessions, alternately in each Faculty (seminars). The visiting students will present cases from their field and help the host students solve them, so that they become familiar with ethical dilemmas from other disciplines and interact with each other.

After the seminar-type meetings, interdisciplinary groups will be formed and they will be assigned an ethical dilemma from either of the two specialties. The interdisciplinary groups will have to debate, communicate and reach consensus to analyze and solve the case based on the knowledge acquired in each specialty. Afterwards, they will have to design a presentation of the case in poster format, as well as prepare an oral presentation of it. The presentation of the case at the Congress will be made to the teaching staff of the two subjects and also to evaluators experts in ethics and bioethics, who will attend the congress 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.

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

Continous Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Autonomous resolution of a practical case	15 %	1	0.04	CM21, 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, SM31

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

- Busquets E., Mir J. Fem bioètica. Institut Borja de Bioètica. Universitat Ramon Llull. Esplugues de Llobregat. 2009.
- Carracedo A., Casado M. y González-Duarte R. (Eds) Documento sobre pruebas genéticas de filiación. Observatori de Bioètica i Dret de la Universitat de Barcelona. Novembre 2006.
- Casado M. (ed.). Materiales de Bioética y Derecho. Ed. Cedecs. Barcelona. 1996.
- Casado M. (ed.) Sobre la dignidad y los principios. Análisis de la Declaración Universal sobre Bioética y Derechos Humanos de la Unesco. Editorial Aranzadi. Cizur Menor. 2009.
- Casado M. y Egozcue J. (Eds) Documento sobre células madre embrionarias. Observatori de Bioètica i Dret de la Universitat de Barcelona. Diciembre 2001.
- Casado M. y Egozcue J. (Eds) Documento sobre donación de ovocitos. Observatori de Bioètica i Dret de la Universitat de Barcelona. Abril 2001.
- Casado M. y Egozcue J. (Eds) Documento sobre investigación con embriones. Observatori de Bioètica i Dret de la Universitat de Barcelona. Julio 2000.
- Casado M. y Egozcue J. (Eds) Documento sobre nanotecnología y bioética global. Observatori de Bioètica i Dret de la Universitat de Barcelona. Abril 2001.

- Casado M. y Egozcue J. (Eds) Documento sobre selección de sexo. Observatori de Bioètica i Dret de la Universitat de Barcelona. Febrero 2003.
- Casado M., Lopez-Baroni M. Manual de bioética laica (I): Cuestiones clave. Edicions de la Universitat de Barcelona. Barcelona, 2018.
- Coughlin S. Case studies in public health ethics (2nd edition). American Public Health Association. Washington, 2009.
- Cuadernos de la Fundación Victor Grífols i Lucas. Problemas prácticos del Consentimiento Informado. Fundación Victor Grífols i Lucas. Barcelona, 2002.
- De Semir, V. La ética, esencia de la comunicación científica y médica. Cuadernos de la Fundació Victor Grífols i Lucas nº 25. Barcelona .2010.
- Egozcue J., Shenfield. F. (eds.). Responses to human cloning. Sèrie Jornades Científiques nº 5. Institut d'Estudis Catalans. Barcelona. 1998.
- García Manrique R. La medida de la humano. Ensayo de bioética y cine. Materiales de Bioética. Associació de Bioètica i Dret de la UB i Observatori de Bioètica i Dret. Barcelona 2008.
- García-Manrique R. (ed.) El cuerpo diseminado. Estatuto, uso y disposición de los biomateriales huamnos. Ed. Aranzadi. Navarra, 2018.
- Harris J. On cloning. Routledge. London. 2004.
- Institut Borja de Bioètica URL (eds.). Bioètica aplicada. Ed. Proteus. Cànoves. 2011.
- Jonsen A.R., Siegler M., Winslade W.J. Ética clínica. Ariel. Barcelona. 2005.
- Kuhse H., Singer P. (eds) A Companion to Bioethics. Blackwell Companions to Philosophy. 2nd edition. Willey-Blackwell. Hong Kong. 2012
- Liácer M.R., Casado M. Buisan L. (Eds) Documento sobre bioética y big data: explotación y comercialización de los datos de los usuarios de la sanidad pública Observatori de Bioètica i Dret de la Universitat de Barcelona. Enero 2015. ISBN 978-84-475-4210-9
- López Baroni, M. J., Marfany, G., De Lecuona, I., Corcoy, M., Boada, M., Royes, A., Santaló, J., Casado, M. 2017. La edición genómica aplicada a seres humanos: aspectos éticos, jurídicos y sociales. Revista de Derecho y Genoma Humano. Genética, Biotecnología y Medicina Avanzada / Law and the Human Genome Review. Genetics, Biotechnology and Advanced Medicine: 46, 317-340
- López-Baroni M. Bioética y tecnologías disruptivas. Ed Herder. Barcelona, 2021.
- López-Baroni M. El origen de la bioética como problema. Edicions de la Universitat de Barcelona. Barcelona, 2016.
- Macklin R. La ética y la investigación clínica. Cuadernos de la Fundació Victor Grífols i Lucas nº 23. Barcelona .2010.
- Martín A., Martín-Arribas M.C., di Donato J.H., Posada M. Las cuestiones ético-jurídicas más relevantes en relación con los biobancos. Instituto de Salud Carlos III. Madrid. 2005.
- Montero F., Morlans M. Para deliberar en los comités de ética. Fundació Doctor Robert. Universitat Autònoma de Barcelona. Barcelona. 2009.
- Rendtorff J.D. i Kemp P. (eds.) Basic ethical principles in European Bioethics and Biolaw. Institut Borja de Bioètica. Barcelona. 2000.
- Sánchez-Caro J., Abellán F. (eds.) Investigación Biomédica en España. Aspectos Bioéticos, Jurídicos y Científicos. Fundación Salud 2000 y Editorial Comares. Granada. 2007.
- Santaló J. 2011. Ethics and genetics. A quick view. Revista de Bioética y Derecho 21, 40-45.
- Santaló J. y Casado M. (Eds) Documento sobre bioética y edición genómica en humanos. Observatori de Bioètica i Dret de la Universitat de Barcelona. Diciembre 2016. ISBN 978-84-475-4063-
- Santaló J., Berdasco M. 2022. Ethical implications of epigenetics in the era of personalized medicine. Clinical Epigenetics. doi: 10.1186/s13148-022-01263-1.
- SEF. Reproducción Humana Asistida. Protocolos de Consentimiento Informado. Madrid, 2002.
- Steinbock B. (ed.). The Oxford Handbook of Bioethics. Oxford University Press. Oxford. 2007. Enllaços web:

Disponibles al Campus Virtual de l'assignatura (<https://cv2008.uab.cat/>) 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/> Comité de Bioética de España: <http://www.comitedebioetica.es/>

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

EuroBioBank: <http://www.eurobiobank.org/>

Fundació Grífols: <http://www.fundaciogrifols.org/es/web/fundacio/home> Institut Borja de Bioètica:
<http://www.ibbioetica.org/es/#&panel1-1> Observatori de Bioètica i Dret: <http://www.pcb.ub.es/bioeticaidret/>

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/egs/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.

Language list

Name	Group	Language	Semester	Turn
(SEM) Seminars	741	Catalan	second semester	morning-mixed
(TE) Theory	74	Catalan	second semester	morning-mixed