



BIOETHICS GUIDE

Course 2016-17

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1. Descriptive Details.

Name of the subject: BIOETHICS	
Code: 9970001311	
Degree program: BIOTECHNOLOGY	
Year in which is taught: 3º BIOTECHNOLOGY	
ECTS credits: 6	Amount of classroom´s hours: 69 h Study mode: Classroom
Regulatory prerequisites:	Recommended: N/A
Teacher´s name: Emanuele Valenti	
Academic advising /guidance: Tuesday 11.30h. Email appointment req.	

2. Contextualization of the content and skills of the subject.

Bioethics is a mandatory course of 6 ECTS that is given for a trimester in the third year of the degree in Biotechnology. This matter is within the module of "Social and Legal Aspects of Biotechnology" which has a total of 30 ECTS.

The overall objective of this course is the students' knowledge of the main ethical, legal and social features related to Biotechnology and research.

The subject defines the ethical framework of professionals' decision-making processes facing the challenges of future development of research world and biotechnology. Through the study of bioethics, students will consider different proposals and fundamentals concepts to be able to approach ethical issues using specific models of moral reasoning.

3. Specific Skills

When completed (this course) the student should be capable to:



1. Analyse ethical issues in biotechnological profession
2. Identify professional responsibility in relation to the ethical and legal responsibility
3. Manage civil and individual ethics in biomedical research
4. Respect ethical requirements of confidentiality and informed consent
5. Identify best practices in clinical research
6. Have deep knowledge of professional deontology in relation to ethical and legal frameworks available in biotechnological world
7. Approach ethical and legal issues of research involving human beings
8. Prepare a research protocol respecting ethical and legal requirements
9. Have knowledge of public and environmental health issues in order to promote health care, prevent individual and public diseases, contributing to the public health education regarding the following aspects: genetics, gender, life style, demography, environment, society, economy, psychology and culture
10. Use and apply ethical, legal and economic frameworks in relation to health care and drugs
11. Respect ethical, deontological and legal requirements in order to collaborate with other professionals and contribute to the successful team strategy
12. Have knowledge of technical and management skills related with a more general dimension of the profession
13. Identify principles and methodology applied to the biotechnological science, including history and social function of pharmacy
14. Have basic knowledge of the National Health System, and law related to the confidentiality respect, as well as the use of drugs and pharmaceutical care

4. General Skills (UEM cross-disciplinary skills)

1. **Values, attitudes and professional strategies:** identify and manage values involved in biotechnological research, societal and legal responsibilities related to the exercise of professional life
2. **Evaluation:** understanding the more general ethical codes related to biotechnological research and consider legal aspects regulating national and international clinical trials
3. **Critical approach:** evaluation of the economical and societal impact of biotechnological research in order to exercise professional responsibility in relation to the cultural and environmental consequences of the



biotechnological professionalism

4. **Information:** use the general and specific sources of information in order to consider ethical and legal issues of biotechnological world

5. **Contents** (*close number of ECTs appears in brackets*)

TOPIC 1. THE MORAL EXPERIENCE

Formality and contents. Facts, values and duties.

TOPIC 2. ETHICS, RELIGION, LAW AND PROFESSIONAL DEONTOLOGY

TOPIC 3. THE BIRTH OF BIOETHICS

History of bioethics

TOPIC 4. PATERNALISM IN SCIENCE AND MEDICINE

Positivist idea of science

TOPIC 5. AUTONOMY AND INFORMED CONSENT IN BIOMEDICAL RESEARCH

TOPIC 6. DECISION MAKING METHODS IN BIOETHICS

TOPIC 7. ETHICAL CODE IN RESEARCH WITH HUMAN BEING

The Nuremberg code, the Belmont Report, the Oviedo Covenant

TOPIC 8. RESEARCH ETHICS WITH HUMAN BEING

The clinical trial

TOPIC 9. RESEARCH ETHICS WITH ANIMALS

TOPIC 10. NEUROETHICS

Research ethics in neurosciences



6. Training's Activities.

The training activities, which will be carried out in order to facilitate the mixture of the different topics along the entire subject, will include the following activities:

- **Lectures:** we will follow the seminar methodology exposing each topic before exposing theory and then approaching a specific practice case, in order to stimulate a common discussion around the group
- **Problem based learning:** we will consider an ethical case conforming to the topic previously introduced. Students we will use deliberative methodology in order to analyze the case and manage the case following a specific model of moral reasoning.
- **Driven discussion:** the analysis of the cased proposed will stimulate a discussion around the topic identifying students' proposals to approach the ethical issues and a general debate on the national and international circumstances influencing the ethical case, with strong reference to legal and societal framework.
- **Narrative:** narrative methodology will stimulate discussion and learning of the most important aspect of the subject: role play, simulation of conflictive circumstances of the professional life, use of video facilitating the understanding of the topic, analysis of the text and scientific material

7. Teaching's Methodologies.

Teaching methodology involves a mixed system of strategies such as Theory lecture, Case Based Learning, Deliberative Methodology along with power point presentation, and paper writing, as well as the use of moodle on-line platform resources as support for the activities of teachers and students. Of course, all activities will be supported by a bibliography and updated web resources, scientific rigor available to students.

8. Assessment's Procedures.

Objective evaluation: it consists in the 60% of the final mark and evaluates the specific knowledge of the student in relation to the theory and topic



lectured in the classroom. Evaluation up 5/10 will be enough to pass this part. Those educational activities that do not meet the minimum passing score (5), will undergo a process of further evaluation to be completed in an extraordinary call.

Active methodology: it consists in 40% of the final mark and evaluates students' performances to interact with the group, present lecture and discuss ethical aspects of an assigned topic. Evaluation up 2/4 will be enough to pass this part

Attendance to lecturers is mandatory being necessary **at least to justify 50% attendance** in order to receive academic guidance and support by the teacher. Otherwise, assistance and guidance by the teacher might be refused. Additionally, inability to prove minimum level of students' attendance allows the teacher to reject them to perform the knowledge tests of the ordinary call.

To achieve this point and to know their attendance's levels, the students have to register themselves by means of the GPR electronic system, which is supplied by the University and located at the entry of each classroom. The system represents a key tool to warranty the active role of the students.

Assessment Scheme According To Indicated Training Activities:

100%	Knowledge Tests:	Test and/or short questions	60%
	Scientific Papers and Problems:	Activities, scientific articles, Blackboard Chats	40%

9. Materials and Other Considerations

Materials: Digital whiteboard, documentary material, collaborative activities and case studies. Biochemistry and molecular biology's lab material.



REFERENCES

Fundamental references

- Sánchez González MA. Ética, bioética y globalidad. Madrid, CEP, 2006.
- Gracia D. Fundamentos de bioética. 2ª ed, Madrid, Triacastela, 2007.
- Gracia D. Como arqueros al blanco. Madrid Triacastela., 2004.
- Gracia D. Procedimientos de decisión en ética clínica. 2ªed, Madrid, Triacastela, 2007.

Complementary references

- Sánchez González MA. Historia, teoría y métodos de la medicina: Introducción al pensamiento médico. 2ª ed., Madrid, Elsevier-Masson, 2008.
- Veatch R. The Basic of Bioethics. 2nd ed. Upper Saddle River, New Jersey, Prentice Hall.
- Jonsen A, Siegler M, Winslade W. Clinical Ethics: A Practical Approach to Ethical Decisions in Clinical Medicine, 6th ed. McGraw-Hill Medical Publishing New York: 2006
- Beauchamp TL, Childress JF. Principios de ética biomédica. Barcelona, Masson, 1999.
- Hengelhardt HT, The foundation of bioethics, New York, Oxford University Press, 1996.

10. Course work Outline (only indicative)

11. Resources

Education material will be provided in classroom or throw virtual campus.