COURSE: ETHICS

SUBJECT MATTER: Non-Technical Complements

MODULE: Complements

PROGRAM: Degree in Biotechnology

GENERAL FEATURES *

Type: ☐ Basic training, ☑ Compulsory, ☐ Elective
☐ Final Degree Project, ☐ Practicum

Duration: Semestral

Semester/s: 5

Number of ECTS credits: 5

Language: Spanish/Catalan

DESCRIPTION

SHORT DESCRIPTION AND JUSTIFICATION
After a brief introduction to the philosophy of science and technology, the relationships between science, technology and society are analyzed. Subsequently, an introduction to ethics and, in particular, applied ethics and professional ethics.
The subject aims to provide students with the necessary skills to become aware of the meaning of their profession; to consider the consequences of their professional decisions and performances, both individually and professionally; and, finally, to make ethical reasoning when it comes to dealing with the problems and dilemmas that may arise in their professional practice.

COMPETENCES
• That students have the ability to gather and interpret relevant data (normally within their area of study) to think over and make judgments on relevant social, scientific or ethical issues. (CB3)
• Be able to incorporate ethical-deontological arguments to work in a professional environment in a responsible manner. (T4)
• Be able to understand and apply general knowledge of Computer Science, Economics, Technical English, Ethics and Management to the field of Biotechnology. (E2)

PREVIOUS REQUIREMENTS *

No requirements

* Estas características no deben ser modificadas sin la aprobación de los órganos responsables de las estructuras académicas de nivel superior (materia, módulo y/o plan de estudios).
CONTENTS:

1. Are science and technology neutral?
   1.1. Analysis of previous ideas
   1.2. What is science?
   1.3. Technique, technology and technoscience.
   1.4. The question of neutrality in science and technology.
   1.5. The relationships between Science, Technology and Society.

2. Introduction to ethics.
   a. Ethics and morality.
   b. The moral character of man.
   c. The different types of rules.
   d. The main ethical proposals.

3. Professional ethics.
   a. Applied ethics
   b. Professional ethics.
   c. Introduction to bioethics
   d. Ethics codes.
   e. Case Analysis

METHODOLOGY

LEARNING ACTIVITIES * (Completar la taula tot relacionant activitats, càrregues de treball, en crèdits ECTS, i competències.)

<table>
<thead>
<tr>
<th>Learning activities</th>
<th>ECTS</th>
<th>Competences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lectures</td>
<td>0,9</td>
<td>CB3, T4, E2</td>
</tr>
<tr>
<td>Case and Problem-Solving Sessions</td>
<td>0,7</td>
<td>CB3, T4, E2</td>
</tr>
<tr>
<td>Seminars</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Compulsory activities</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Practical and Lab Work</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Presentations</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Personal Study</td>
<td>3,3</td>
<td>CB3, T4, E2</td>
</tr>
<tr>
<td>Assessment Tasks (Exams, Continuous...</td>
<td>0,1</td>
<td>CB3, T4, E2</td>
</tr>
</tbody>
</table>

TOTAL 5,0 CB3, T4, E2

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TEACHING METHODOLOGY.

LEARNING ACTIVITIES

• Lectures - Presentation and explanation of contents by a teacher (possibly including demonstrations).
• Case and Problem-Solving Sessions - Resolution of exercises and problems, and exposition / discussion of cases by a teacher with the active participation of students.
• Seminars - Period of instruction carried out by a teacher with the aim of reviewing, discussing and resolving doubts about the materials and topics presented in the lectures and in the case and problem-solving sessions.
• Practical and Lab - Period where the student performs laboratory activities or similar (computer practices, projects, workshops, etc.) under the direct supervision of a teacher.
• Presentations - Oral presentation by a student to a teacher and/or other students. The presentation can be a work prepared by the student through searches in published bibliography, or a summary of a practical work or a project.
• Personal study activities - Personal work of the student necessary to acquire the competences of each subject matter, and to assimilate the knowledge exposed in lectures and case and problem-solving sessions, using the recommended reference materials. They also include the preparation of tasks related to the other activities, and the preparation of exams.
• Assessment Tasks - Oral and / or written tests made during the academic period of a course, or once it has finished (final exams, follow-up controls).

ASSESSMENT

ASSESSMENT METHODS*

<table>
<thead>
<tr>
<th>Evaluation methods</th>
<th>(%)</th>
<th>Competences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Final exam</td>
<td>40</td>
<td>CB3, E2, T4</td>
</tr>
<tr>
<td>Continuous Assessment Activities</td>
<td>30</td>
<td>CB3, E2, T4</td>
</tr>
<tr>
<td>Reports and Presentations</td>
<td>25</td>
<td>CB3, E2, T4</td>
</tr>
<tr>
<td>Participation</td>
<td>5</td>
<td>CB3, E2, T4</td>
</tr>
</tbody>
</table>

LEARNING OUTCOMES

1. The student will be able to define in detail the concepts "science", "technique", "technology", and "technoscience".
2. The student will be able to characterize the scientific knowledge.
3. The student will be able to describe the main proposals that explain the evolution of science.
4. The student will be able to characterize the scientific and technical subsystems, as well as the relationships that these subsystems maintain with the other subsystems that compose social and natural systems.

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5. The student will be able to explain the axiological non-neutrality of science and technique.
6. The student will be able to characterize the relationship of the human beings with the technique over time.
7. The student will be able to distinguish between ethics and moral.
8. The student will be able to explain the moral character of man.
9. The student will be able to distinguish between legal norm, social norm, technical norm and moral norm.
10. The student will be able to characterize and compare the main currents of ethical foundations.
11. The student will be able to explain the foundations of professional ethics.
12. The student will be able to explain the sense of his profession.
13. The student will be able to explain the bioethics principles.
14. The student will be able to analyze professional codes.
15. The student will be able to formulate and argue ethical judgments about the cases that are proposed.

QUALIFICATION

The qualification corresponding to the subject of ethics is obtained by means of the weighted average of the qualifications of the different evaluation methods with the following values.

40% Final exam
30% Continuous assessment activities
25% Reports
5% Participation

* The average will be made if and only if the mark of each of the assessment methods is greater than three. If the mark of any of the methods is less than three, the student will not pass the subject.

Students who fail must reseat the final exam. Optionally, they can improve their grade by redoing some of the learning activities, following the teacher’s indications.

ASSESSMENT OF THE COMPETENCES

To evaluate the CB3 competence, the qualifications of some questions in the final exam, the qualifications of Continuous Assessment Activities, as well as the qualifications related to some of the proposed reports and participations will be used as indicators.

To evaluate the T4 competence, the qualifications of some questions in the final exam, the qualifications of Continuous Assessment Activities, as well as the qualifications related to some of the proposed reports and participations will be used as indicators.

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To evaluate the E2 competence, the qualifications of some questions in the final exam, the qualifications of Continuous Assessment Activities, as well as the qualifications related to some of the proposed reports and participations will be used as indicators.

**BIBLIOGRAPHY**


**DOCUMENT HISTORY**

**PREVIOUS REVISIONS**
July 15th 2015, Dr. Albert Florensa
July 26th 2016, Dr. Albert Florensa

**CURRENT REVISION**
March 12th 2019, Dr. Albert Florensa