

Bioethics in Agricultural Science [327]

COURSE OUTLINE

(1) GENERAL

SCHOOL	ANIMAL BIOSCIENCES		
ACADEMIC UNIT	DEPARTMENT OF ANIMAL SCIENCE		
LEVEL OF STUDIES	Undergraduate [Major Elective]		
COURSE CODE	327	SEMESTER	4th
COURSE TITLE	BIOETHICS IN AGRICULTURAL SCIENCE		
INDEPENDENT TEACHING ACTIVITIES <i>if credits are awarded for separate components of the course, e.g. lectures, laboratory exercises, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits</i>		WEEKLY TEACHING HOURS	CREDITS
Theory		3	2
Total		3	2
<i>Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).</i>			
COURSE TYPE <i>general background, special background, specialised general knowledge, skills development</i>	General background		
PREREQUISITE COURSES:	NO		
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	GREEK		
IS THE COURSE OFFERED TO ERASMUS STUDENTS:	NO		
COURSE WEBSITE (URL):	https://oeclass.aua.gr/eclass/courses/6182/		
TEACHING STAFF:	PANAGIOTA KOUTSOULI, ARIADNI LOUKIA HAGER		

(2) LEARNING OUTCOMES

Learning outcomes
<i>The course learning outcomes, specific knowledge, skills and competences of an appropriate level, which the students will acquire with the successful completion of the course are described.</i>
Consult Appendix A - Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area - Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B - Guidelines for writing Learning Outcomes
This course aims to introduce the students of the Department of Animal Science to the meaning of bioethics in the agricultural sciences and its importance for animal production. Agricultural science, as a foundational discipline within the domain of agricultural production and natural resource management, exerts a substantial influence on both the environment and human health, as well as animal welfare. In an era characterized by significant advancements in technology, notably including genetic modification, agrochemicals, and biotechnological products, there is an emergence of substantial ethical dilemmas. Students of the Department of Animal Production are expected to demonstrate a comprehensive understanding of these issues, incorporating a multifaceted approach that encompasses both scientific and technical dimensions. Furthermore, they must consider the consequences of their actions on societal, environmental, and biological aspects. The incorporation of ethical principles in the education of future animal scientists is critical. Such principles provide a foundational framework that enables future specialists to evaluate their actions responsibly, to respect human and animal rights, and to operate with integrity and transparency. The cultivation of ethical thinking is a prerequisite for the sustainable and equitable development of the agricultural and food sector. Upon successful completion of this unit, students will be able (according to Bloom) to: - Describe the basic ethical theories (e.g., deontology, utilitarianism) and evaluate their importance in decision making (Knowledge / Comprehension / Evaluation). - Explain the concept of informed consent and patient rights in the context of medical practice (Comprehension / Application). - Analyze bioethical issues related to reproductive technologies, including IVF, surrogacy, and genetic selection of embryos (Analysis / Evaluation).

- Evaluate ethical dilemmas arising from genomic research, gene therapy, and genetic modification (**Analysis / Evaluation**).
- Discuss bioethical issues concerning euthanasia, assisted suicide, and decisions to discontinue treatment (**Comprehension / Evaluation**).
- Assess ethical issues in public health, including pandemics, mandatory vaccination, and allocation of health resources (**Analysis / Evaluation / Application**).
- Analyze bioethical issues arising from the use of animals in research, including limitations on numbers, treatment, and animal rights (**Analysis / Evaluation**).
- Evaluate ethical approaches to environmental issues, such as climate change and biodiversity conservation (**Evaluation / Application**).
- Critically analyze ethical challenges from artificial intelligence, robotics, and biotechnologies, including AI use in diagnosis and treatment (**Analysis / Evaluation**).
- Identify current challenges, emerging trends, and future directions in bioethics (**Knowledge / Comprehension / Analysis**).
- Use scientific texts, reference books, and other resources to independently expand their understanding of bioethical issues in biological sciences (**Application / Analysis / Synthesis**).

General Competences

Taking into consideration the general competences that the degree-holder must acquire (as these appear in the Diploma Supplement and appear below), at which of the following does the course aim?

<i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i>	<i>Project planning and management</i>
<i>Adapting to new situations</i>	<i>Respect for difference and multiculturalism</i>
<i>Decision-making</i>	<i>Respect for the natural environment</i>
<i>Working independently</i>	<i>Showing social, professional and ethical responsibility and sensitivity to gender issues</i>
<i>Team work</i>	<i>Criticism and self-criticism</i>
<i>Working in an international environment</i>	<i>Production of free, creative and inductive thinking</i>
<i>Working in an interdisciplinary environment</i>	<i>.....</i>
<i>Production of new research ideas</i>	<i>Others...</i>
	<i>.....</i>

Adapting to new situations

Decision-making

Autonomous work

Teamwork

Searching, analyzing, and synthesizing data, using the necessary technologies

Promoting free, creative, and deductive thinking.

In each lecture, there will be a case study

- Students will develop skills that are related to searching, analysing, and synthesizing data using new technologies.

- Students will acquire skills related to the respect of living beings and the natural environment.

- In-class discussion of case study projects will contribute to the development of critical and self-critical thinking.

(3) SYLLABUS

Definition and historical development of bioethics (main schools of thought, fundamental principles)

Methodology and tools of bioethics

Bioethics and human health

Bioethics and reproduction (biotechnological methods, gene therapy)

Bioethics and experiments on animal organisms

Bioethics and the environment

Bioethics and Public Health

Bioethics and the use of artificial intelligence in diagnosis and treatment

Bioethics and end-of-life decisions (termination of treatment, organ donation, euthanasia)

Bioethics and society (health data protection, extensive gene testing)

(4) TEACHING and LEARNING METHODS - EVALUATION

DELIVERY <i>Face-to-face, Distance learning, etc.</i>	Face to face
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY <i>Use of ICT in teaching, laboratory education, communication with students</i>	PowerPoint presentations, videos, and use of the e-class platform

TEACHING METHODS The manner and methods of teaching are described in detail. Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artistic creativity, etc. The student's study hours for each learning activity are given as well as the hours of non-directed study according to the principles of the ECTS	<table> <tr> <th>Activity</th><th>Semester workload</th></tr> <tr> <td>Lectures</td><td>26</td></tr> <tr> <td>Case study</td><td>6</td></tr> <tr> <td>Written assignment / presentation</td><td>8</td></tr> <tr> <td>Individual study</td><td>10</td></tr> <tr> <td></td><td></td></tr> <tr> <td></td><td></td></tr> <tr> <td></td><td></td></tr> <tr> <td></td><td></td></tr> <tr> <td>Course total (25h of workload per ECTS)</td><td>50</td></tr> <tr> <td></td><td></td></tr> </table>	Activity	Semester workload	Lectures	26	Case study	6	Written assignment / presentation	8	Individual study	10									Course total (25h of workload per ECTS)	50		
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STUDENT PERFORMANCE EVALUATION Description of the evaluation procedure Language of evaluation, methods of evaluation, summative or conclusive, multiple-choice questionnaires, short-answer questions, open-ended questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory work, clinical examination of patient, art interpretation, other Specifically-defined evaluation criteria are given, and if and where they are accessible to students.	The language of evaluation is Greek Methods of evaluation: 1. Short answer questions and multiple-choice tests (20% of the total grade) every week. 2. Written assignment / presentation, (20% of the total grade). 3. Open-ended Test Questions in the final exam (60% of the total grade)																						

(5) ATTACHED BIBLIOGRAPHY

- Suggested bibliography: Tsinorema, Stavroula & Loui Kitsou, Topics in Bioethics – Life, Society, and Nature Facing the Challenges of Life Sciences, University Publications of Crete, Crete 2023, 544 σ. Papadopoulou, Th., (2015). Special Topics in Bioethics [Undergraduate textbook] Kallipos, Open Academic Publications. https://dx.doi.org/10.57713/kallipos-721 Papadopoulou, Th. (2015). Defining the concepts of Bioethics [Chapter]. in «Papadopoulou Th. 2015. Special Topics in Bioethics» [undergraduate handbook]. Kallipos, Open Academic Publications. https://hdl.handle.net/11419/3159 https://repository.kallipos.gr/bitstream/11419/6020/8/01_chapter_9.pdf https://bioethics.org.gr/bioithiki/nomoi/ellada/ -Related academic journals: [Bioethica] https://ejournals.epublishing.ekt.gr/index.php/bioethica/index The American Journal of Bioethics https://www.tandfonline.com/journals/uajb20
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