SZKOŁA GŁÓWNA GOSPODARSTWA WIEJSKIEGO

Social and legal aspects of biotechnology, part I

Educational subject description sheet

Basic information

Field of study Biotechnology	**Didactic cycle** 2024/25
Speciality -	**Subject code** BBTBTjS_D.310.01608.24
Organizational unit Faculty of Biology and Biotechnology	**Lecture languages** english
Study level first cycle (engineering degree)	**Mandatory** Obligatory subjects
Study form full-time studies	**Block** Humanities and social subjects
Education profile General academic	**Disciplines** Biological sciences

Coordinator	Stanisław Karpiński
Teacher	Stanisław Karpiński

Period Semester 5	**Examination** Pass with grade **Activities and hours** Lecture: 20	**Number of ECTS points** 2

Goals

Code	Goal
C1	Modern biotechnology is used in many spheres of the economy, including medicine, agriculture and the food industry. At the same time, in recent years it has been at the center of intense social and political debate. The aim of the course is to introduce students to the most important issues related to the public perception of biotechnology and to familiarize them with the legal regulations creating the legal framework for the use of biotechnology, with particular emphasis on GMOs.

Entry requirements

Genetic engineering, biotechnology subjects
Knowledge of medical biotechnology, animal biotechnology and agrobiotechnology

Subject's learning outcomes

Code	Outcomes in terms of	Effects	Examination methods
Knowledge – Student knows and understands:			
W1	the national and international legal regulations concerning the use of biotechnology	BTj_K3_W10, BTj_K3_W14, BTj_K3_W15_inz	Essay, Test (written or computer based)
Skills – Student can:			
U1	understand the issues of biosafety of biotechnology	BTj_K3_U07, BTj_K3_U12_inz, BTj_K3_U13_inz	Essay, Test (written or computer based)
U2	discuss the possibilities of protecting intellectual property rights in biotechnology	BTj_K3_U08_inz, BTj_K3_U13_inz, BTj_K3_U18	Essay, Test (written or computer based)
Social competences – Student is ready to:			
K1	discuss the issues related to social perception and acceptance of biotechnology in Poland and in the world	BTj_K3_K06, BTj_K3_K07	Essay, Test (written or computer based)

Study content

No.	Course content	Subject's learning outcomes	Activities
1.	Lecture topics: 1. Biotechnology and conditions for its development. 2. Social perception of biotechnology. 3. Biological safety and biohazards 4. International law related to biotechnology. 5. National law on biotechnology with particular emphasis on GMOs. 6. Forms of intellectual property in biotechnology. 7. Patenting in biotechnology.	W1, U1, U2, K1	Lecture

Course advanced

Activities	Methods of conducting classes
Lecture	Lecture, Problem lecture, E-learning - lecture part

Activities	Examination method	Percentage
Lecture	Essay	50%
Lecture	Test (written or computer based)	50%

Activities	Credit conditions
Lecture	The following are used to verify the learning outcomes: 1. Grade of the written test; 2. Assessment of the essay. For each of these elements, the maximum number of points to be obtained is determined: 1) 20 points; 2) 20 points (40 points in total). A student who has obtained at least 50% of points in each element will pass the subject, receiving a grade depending on all obtained points. Rating weights: 1 - 50%, 2 - 50%

Literature

Obligatory

1. Sherlock Richard, Morrey John D: Ethical Issues in Biotechnology, Rowman & Littlefield Publishing Group Inc, 2002

Optional

1. Review articles

Calculation of ECTS points

Activity form	Activity hours*
Lecture	20
Preparation for the test	30
Student workload	**Hours** 50
Number of ECTS points	**ECTS** 2

* hour means 45 minutes

Effects

Code	Content
BTj_K3_K06	The graduate is ready to presenting justified arguments supporting one’s standpoint regarding scientific, ethical and social topics influencing the progress in biological sciences;
BTj_K3_K07	The graduate is ready to recognising the scope and ethical nature of the effects of utilising biotechnology and its impact on the society; settling ethical dilemmas related to the work of a biotechnologist;
BTj_K3_U07	The graduate can follow proper principles of safety and work ethics during the execution of scientific research using various experimental methods under laboratory and field conditions
BTj_K3_U08_inz	The graduate can assess the social, economic and legal conditions of the activities of a biotechnologist;
BTj_K3_U12_inz	The graduate can plan and perform experiments related to the preparation, creation and utilisation of biological material in a production process;
BTj_K3_U13_inz	The graduate can propose analytical methods and plan an experiment for solving engineering tasks related to various stages of creating a biotechnological product;
BTj_K3_U18	The graduate can coherently communicate within the scope of the topics pertaining to biotechnology both with specialists and with outside receivers;
BTj_K3_W10	The graduate knows and understands terms, principles and theories related to processes and mechanisms which have shaped the world of nature, knowing how they can be used efficiently;
BTj_K3_W14	The graduate knows and understands the significance of copyright protection, the protection of industrial property and patent right;
BTj_K3_W15_inz	The graduate knows and understands the systems currently recommended for managing quality and safety in the biotechnological industry; the principles of creating and developing the forms of individual entrepreneurship;