

## DESCRIPTION OF THE COURSE OF STUDY

<b>Course code</b>	0912-7LEK-F-9-GMO	
<b>Name of the course in</b>	Polish	<b>Żywność modyfikowana genetycznie</b>
	English	<b>Genetically-modified foods [GM foods]</b>

### 1. LOCATION OF THE COURSE OF STUDY WITHIN THE SYSTEM OF STUDIES

<b>1.1. Field of study</b>	Medicine
<b>1.2. Mode of study</b>	Full-time
<b>1.3. Level of study</b>	Uniform master's studies
<b>1.4. Profile of study*</b>	General academic
<b>1.5. Specialization*</b>	lack
<b>1.6. Unit running the course of study</b>	Faculty of Medicine and Health Sciences
<b>1.7. Person/s preparing the course description</b>	Dr n. med. Katarzyna Krekora-Wollny
<b>1.8. Person responsible for the course of study</b>	Dr n. med. Katarzyna Krekora-Wollny
<b>1.9. Contact</b>	Wnoz_inm@ujk.edu.pl

### 2. GENERAL CHARACTERISTICS OF THE COURSE OF STUDY

<b>2.1. Affiliation with the module</b>	elective
<b>2.2. Language of instruction</b>	English
<b>2.3. Semesters in which the course of study is offered</b>	3 <sup>rd</sup>
<b>2.4. Prerequisites*</b>	none

### 3. DETAILED CHARACTERISTICS OF THE COURSE OF STUDY

<b>3.1. Form of classes</b>	Lecture- 15h	
<b>3.2. Place of classes</b>	Traditional classes in the didactic room of JKU	
<b>3.3. Form of assessment</b>	Credit with grade	
<b>3.4. Teaching methods</b>	Informative lecture	
<b>3.5. Bibliography</b>	<b>Required reading</b>	Genetic Modification and Food Quality, Author(s): Robert Blair, Joe M. Regenstein
	<b>Further reading</b>	Genetically Modified Organisms in Developing Countries ; Edited by Ademola A. Adenle, Colorado State University , E. Jane Morris, University of Leeds , Denis J. Murphy, Cambridge July 2017

### 4. OBJECTIVES, SYLLABUS CONTENT AND INTENDED TEACHING OUTCOMES

<p><b>4.1. Course objectives (lecture)</b></p> <p>C1 – knowing the benefits and risks associated with the creation of GM organisms.</p> <p>C2- acquiring knowledge in the field of techniques for obtaining transgenic [plant and animal] organisms,</p> <p>C3- knowledge of the types of genetic modifications, understanding the potential risks associated with genetically modified food.</p> <p>C4- gaining knowledge about genetically modified food, conventional and bio-food, running genetically modified crops (environmental, health and ethical context)</p>
<p><b>4.2. Detailed syllabus (lecture)</b></p> <ol style="list-style-type: none"> <li>1. A brief history and contemporaneity of genetics. Model organisms in genetic research.</li> <li>2. Genetics, genetic engineering and biotechnology. Advantages of transgenic organisms.</li> <li>3. Genetic modifications as intellectual and legal property, its protection.</li> <li>4. Genomics; learning the future. Genetically modified organisms (GMOs). The impact of GM organisms on the natural environment. Genetically modified organisms in environmental protection. Genetically modified organisms - threats to the environment.</li> <li>5. Genetically modified food; pros and cons.</li> <li>6. Genetically modified food of plant and animal origin. .</li> <li>7. Potential hazards resulting from the consumption of genetically modified food by animals and the final consumer - human.</li> <li>8. Practical use of molecular techniques in identifying genetically modified food.</li> <li>9. Law on GMOs.</li> </ol>

#### 4.3 Education outcomes in the discipline

Code	A student, who passed the course	Relation to teaching outcomes
within the scope of <b>KNOWLEDGE:</b>		
...W01	determines benefits and risks arising from the presence in the ecosystem of genetically modified organisms (GMOs);	C W10
within the scope of <b>ABILITIES:</b>		
...U01	applies dietary treatment (including enteral and parenteral feeding);	E.U25.

#### 4.4. Methods of assessment of the intended teaching outcomes

Teaching outcomes (code)	Method of assessment (+/-)																				
	Exam oral/written*			Test*			Project*			Effort in class*			Self-study*			Group work*			Others*		
	Form of classes			Form of classes			Form of classes			Form of classes			Form of classes			Form of classes					
	L	C	...	L	C	...	L	C	...	L	C	...	L	C	...	L	C	...	L	C	...
...W01				+																	
W02				+																	
W02				+																	
U01				+																	
U02				+																	

\*delete as appropriate

#### 4.5. Criteria of assessment of the intended teaching outcomes

Form of classes	Grade	Criterion of assessment
lecture (L)	3	Test – 61-68% Mastering program content at the elementary level
	3,5	Test – 69-76% Mastering program content at the elementary level, systematized answers
	4	Test – 77-84%. Mastering program content at the elementary level, systematized answers. Problem solving in typical situations
	4,5	Test – 85-92% The scope of the presented knowledge goes beyond the basic level based on the supplementary reference literature. Solving problems in new and complex situations.
	5	Test – 93-100% The scope of the presented knowledge goes beyond the basic level based on independently acquired scientific sources of information.

- Thresholds are valid from 2018/ 2019 academic year

#### 5. BALANCE OF ECTS CREDITS – STUDENT'S WORK INPUT

Category	Student's workload
	Full-time studies
<b>NUMBER OF HOURS WITH THE DIRECT PARTICIPATION OF THE TEACHER /CONTACT HOURS/</b>	<b>15</b>
Participation in lectures*	15
Participation in classes, seminars, laboratories*	
Preparation in the exam/ final test*	
Others*	
<b>INDEPENDENT WORK OF THE STUDENT/NON-CONTACT HOURS/</b>	<b>10</b>
Preparation for the lecture*	5
Preparation for the classes, seminars, laboratories*	
Preparation for the exam/test*	5
Gathering materials for the project/Internet query*	
Preparation of multimedia presentation	
Others*	
<b>TOTAL NUMBER OF HOURS</b>	<b>25</b>
ECTS credits for the course of study	1

**Accepted for execution** (date and signatures of the teachers running the course in the given academic year)

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