Attachment No. 1 to Rector's ordinance No. /2016

DESCRIPTION OF THE COURSE OF STUDY

Course code	**12.6-3LEK-F-GM**	
Name of the course in	Polish	**Żywność modyfikowana genetycznie**
	English	**Genetically-modified foods [GM foods]**

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

1.1. Field of study	medicine
1.2. Mode of study	full-time
1.3. Level of study	uniform Master's study
1.4. Profile of study*	practical
1.5. Specialization*	lack
1.6. Unit running the course of study	Faculty of Medicine and Health Sciences
1.7. Person/s preparing the course description	dr hab. Bożena Witek, prof. UJK
1.8. Person responsible for the course of study	dr hab. Bożena Witek, prof. UJK
1.9. Contact	b.witek@ujk.edu.pl

2. GENERAL CHARACTERISTICS OF THE COURSE OF STUDY

2.1. Affiliation with the module	optional – faculty
2.2. Language of instruction	English
2.3. Semesters in which the course of study is offered	Choice between 2nd-9th semester
2.4. Prerequisites*	physiology, biochemistry, biotechnology, genetics

3. DETAILED CHARACTERISTICS OF THE COURSE OF STUDY

3.1. Form of classes		Specialization lecture (15 hours), CLASSES 20 HOURS
3.2. Place of classes		Courses in the teaching rooms of the UJK
3.3. Form of assessment		Credit with grade
3.4. Teaching methods		Problem based methods – problematic lecture
3.5. Bibliography	**Required reading**	Genetically Modified Foods, ISBN: 9781482242812.
	Further reading	

4. OBJECTIVES, SYLLABUS CONTENT AND INTENDED TEACHING OUTCOMES

4.1. Course objectives ***(including form of classes)***

The aim of the lecture is to understand the benefits and risks associated with the creation of GM organisms. Graduates should possess knowledge of the techniques to obtain transgenic organisms [plant and animal], knowledge of the types of genetic modifications, understanding the potential risks connected with genetically modified food. Graduates should also be prepared to discussion about food - genetically modified, conventional and organic foods. They should show interest in the context of environmental, health and ethical conduct of GM crops as well as the marketing of genetically modified products.

4.2. Detailed syllabus ***(including form of classes)***

Brief history and contemporary genetics. Model organisms in genetic research. Genetics, genetic engineering and biotechnology. The advantages of transgenic organisms. Genetic modifications as intellectual property and its legal protection. Genomics; science of the future. Genetically modified organisms (GMOs). The impact of GMOs on the environment. Genetically modified organisms in the environment. Genetically modified organisms - a threat to the environment. Genetically modified food; pros and cons. Genetically modified food of plant and animal origin. Potential risks resulting from the consumption of genetically modified food by animals as well as the final consumer – man. Practical use of molecular techniques in the identification of genetically modified foods. Law about GMOs.

4.3 Education outcomes in the discipline

Code	A student, who passed the course	Relation to teaching outcomes
within the scope of **KNOWLEDGE:**		
W01	outlines the benefits and risks of the presence in the ecosystem of genetically modified organisms (GMOs);	C W10
within the scope of **ABILITIES:**		
U01	uses dietary treatment (including enteral and parenteral).	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*			*Form of classes*		
	L	*C*	...	*L*	*C*	...	*L*	*C*	...	*L*	*C*	...	*L*	*C*	...	*L*	*C*	...	*L*	*C*	...
W01																					
U01																					
...K01																					
...																					

delete as appropriate

4.5. Criteria of assessment of the intended teaching outcomes

Form of classes	Grade	Criterion of assessment
lecture (L)	**3**	61% -68% correct answers
	3,5	69% - 76% correct answers
	4	77% - 84% correct answers
	4,5	85 % -92% correct answers
	5	93-100
classes (C)*	**3**	61% -68% correct answers
	3,5	69% - 76% correct answers
	4	77% - 84% correct answers
	4,5	85 % -92% correct answers
	5	93-100
others (...)*	**3**	
	3,5	
	4	
	4,5	
	5	

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

Category	Student's workload
	Full-time studies
NUMBER OF HOURS WITH THE DIRECT PARTICIPATION OF THE TEACHER /CONTACT HOURS/	**35**
*Participation in lectures**	**15**
*Participation in classes, seminars, laboratories**	**20**
*Preparation in the exam/ final test**	
*Others**	
INDEPENDENT WORK OF THE STUDENT/NON-CONTACT HOURS/	**15**
*Preparation for the lecture**	
*Preparation for the classes, seminars, laboratories**	**10**
*Preparation for the exam/test**	**5**

*Gathering materials for the project/Internet query**	
Preparation of multimedia presentation	
*Others**	
TOTAL NUMBER OF HOURS	**50**
ECTS credits for the course of study	**2**

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

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