

Faculty of Civil and Environmental Engineering				
Agricultural, Food and Forestry Engineering	Agricultural, Food and Forestry Engineering		Agricultural, Food and Forestry Engineering	Studia I stopnia stacjonarne
Common course	Common course		Common course	
Name of course:	Food technology (E)		Course code:	IR1205
Type of course:	Obligatory	Semester 2	ECTS Points	5
Number of hours per semester:	W - 30 C- L- $\frac{3}{0}$ P- Ps- S-			
Introductory Courses:	Biochemistry			
Aims and objectives of the course:	Presentation of knowledge about the classification of raw materials and food products, their basic physical and chemical properties, and methods of measurement. To familiarize students with the basic knowledge of technologies used in food industry. Learning about testing various features of food substances. Developing practical problem-solving skills about unit processes: mechanical, heat and mass transfer in food processing. Awareness of the validity of engineering industry effects on the quality of food and environment.			
Form of examination:	<i>Lecture – half semester exams during the semester, written and oral; laboratory - checking preparation before laboratory exercises, evaluation of individual reports of the ongoing themes.</i>			
Program subjects:	The history and importance of food production. Food production in the world, in Poland and in the Podlasie region. Characteristics of raw materials used for food production. Food products and methods of assessment. Physico-chemical properties of raw materials and food products. Operations of mechanical and thermal processing of food products. Complex mechanical processes -thermal-diffusion and biotechnology. Methods of food preservation. Functional food additives. Small packs and bulk transport applied to food. Cleaning and disinfection of equipment and packaging. Packaging and transport of food products. Energy and water management, environment protection.			
Learning effects:	<i>Student, who has completed the course:</i>			<i>Reference to the direction of learning effects</i>
EK1	classifies raw materials and food products			K1A_W03
EK2	characterizes physico-chemical properties of food			K1A_W03
EK3	describes the unit operations used in food technology			K1A_W10

EK4	knows the methods of food fixation and additives used in food	K1A_W06, K1A_W10	
EK5	conducts testing of selected qualities of the food	K1A_U01; K1A_U02	
EK6	is able to prepare a report about measurements	K1A_W02	
EK7	identifies the impact of industry processes on the quality of food and environment	K1A_K05	
Balance of student workload (in hours)	Participation in lectures	15x2h=	30
	Participation in laboratory exercises	15x2h=	30
	Preparation for laboratory exercises	14x2h=	28
	Development of reports	14x2h=	28
	Taking part in the consultation	3x1h=	3
	Final exam preparation and participation in it	13h+2h=	15
		TOTAL:	134
Quantitative indicators:	Student workload associated with activities that require direct participation of the teacher: 30h+30h+3h+2h=65h		ECTS
		65	2,5
	Student workload associated with the practical activities: 30h+28h+28h+3h=89h	89h	3,5
Basic literature:	<ol style="list-style-type: none"> 1. <i>Pijanowski E., Dłużewski M., Dłużewska A., Jarczyk A. (2004): Ogólna technologia żywności. WN-T Warszawa 2004.</i> 2. <i>Pr. Zb. Pod red. Bednarskiego W.: Ogólna technologia żywności. Skrypt AR-T w Olsztynie, Wydawnictwo ART., Olsztyn 1996.</i> 3. <i>Jarczyk A., Dłużewska E. (2008): Wybrane zagadnienia z ogólnej technologii żywności. Wydawnictwo SGGW, Warszawa. (Laboratorium).</i> 4. <i>Mitek M., Słowiński M.: Wybrane zagadnienia z technologii żywności. Wydawnictwo SGGW, W-wa 2006</i> 		
Complementary literature:	<ol style="list-style-type: none"> 1. <i>Sharma Shri K. : Food process engineering : theory and laboratory experiments . New York : Wiley J., 2000.</i> 2. <i>Lozano, Jorge E. : Trends in food engineering. Food preservation technology series. Lancaster : Technomic Publishers, 2000.</i> 		
Number of learning effect	Verification method of learning effect	form of classes (if there is more than one), which is verified	
EK1	Half-semester lecture tests and qualifying exam	W	
EK2	Half-semester lecture tests and qualifying exam, test from exercises, reports	W, L	

EK3	Half-semester lecture tests and qualifying exam		W
EK4	Half-semester lecture tests and qualifying exam		W
EK5	Individual done laboratory exercises		L
EK6	Individual done reports		L
EK7	Exam		W
Implementing entity:	Division of Agricultural, Food and Forestry Engineering	Lecturers:	<i>dr inż. Dorota Dec</i> <i>dr inż. Roman Niesteruk</i>
Date of execution the program:	09.03.2014	Program developed by:	<i>dr hab. inż. Sławomir Bakier</i>