

STUDY MODULE DESCRIPTION FORM		
Name of the module/subject Basics of Food Production and Food Product Determination		Code 1010611251010615312
Field of study Transport	Profile of study (general academic, practical) (brak)	Year /Semester 3 / 5
Elective path/specialty Food Transport	Subject offered in: Polish	Course (compulsory, elective) obligatory
Cycle of study: First-cycle studies	Form of study (full-time, part-time) full-time	
No. of hours Lecture: 1 Classes: - Laboratory: - Project/seminars: -		No. of credits 1
Status of the course in the study program (Basic, major, other) (brak)		(university-wide, from another field) (brak)
Education areas and fields of science and art technical sciences		ECTS distribution (number and %) 1 100%
Responsible for subject / lecturer: prof. dr hab. inż. Wiesław Zwierzycki email: wieslaw.zwierzycki@put.poznan.pl tel. 61 6652236 Maszyn Roboczych i Transportu ul. Piotrowo 3, 60-965 Poznań		
Prerequisites in terms of knowledge, skills and social competencies:		
1	Knowledge	Student has basic knowledge of physics and chemistry (organic and inorganic).
2	Skills	Student can describe ensuring procedures for food safety in household.
3	Social competencies	Student is able to think and act creatively.
Assumptions and objectives of the course: Understanding basic knowledge of food safe to consumers' health.		
Study outcomes and reference to the educational results for a field of study		
Knowledge:		
1. Student knows the definition of food. Student has knowledge of main process steps of food processing. - [K1A_W03]		
2. Student has a detailed knowledge of food transport in controlled temperature. - [K1A_W10]		
Skills:		
1. Student can classify and characterize the main animal and vegetable raw materials. - [K1A_U01]		
2. Student is able to characterize the basic food preservation technology and modern packaging and food storage systems. - [K1A_U02]		
Social competencies:		
1. Student understands the importance and effects of improper processing, storing and transportation of food. - [K1A_K02]		
Assessment methods of study outcomes		
Written and oral exam.		
Course description		

Definition of food, classifications and characteristics main animal and vegetable raw materials. The main process steps in food processing. Spoilage mechanisms of unfixed food (the main factors influencing the sustainability). Fusing technologies (thermal and athermal). Modern packaging and food storing systems. Supervision of health systems in production and marketing processes (GMP, GHP, HACCP). The vulnerability of transport and transport in controlled temperature (mainly cooling).

Basic bibliography:

1. Ogólna technologia żywności, pod red. E. Pijanowskiego, WNT, Warszawa, 2003;
2. Towaroznawstwo żywności przetworzonej, pod red. F. Świderskiego, Wyd. SGGW, Warszawa, 1999;
3. Luning P.A. i in. Zarządzanie jakością żywności, WNT, Warszawa, 2005
4. Zaleski R.J. Zarządzanie jakością w produkcji żywności, Wyd. AE w Poznaniu 2004;
5. Zarządzanie jakością i bezpieczeństwem żywności, pod red. J. Kijowskiego i T. Sikory, WNT, Warszawa, 2003
6. Lisińska-Kuśnierz M., Ucherek M. Postęp technologiczny w opakownictwie, Wyd. AE w Krakowie, 2003
7. Mokrzyśczak H. Fizykochemiczne cechy produktu [w:] Zarządzanie produktem w logistyce przedsiębiorstw (E. Gołomska, H. Mokrzyśczak), Wyd. ZCO, Poznań-Zielona Góra, 1997
8. Pojazdy chłodnicze w transporcie żywności. pod red. W. Zwierzyckiego i K. Bieńczyka, Wyd. SYSTHERM, Poznań, 2005

Additional bibliography:

Result of average student's workload

Activity	Time (working hours)	
1. Participation in lecture	15	
2. Preparedness to laboratories	0	
3. Participation in laboratories	0	
4. Consolidation on lecture/seminars	0	
5. Participation in the exam	3	
6. Consultations	3	
7. Exam preparedness	12	
Student's workload		
Source of workload	hours	ECTS
Total workload	33	1
Contact hours	21	1
Practical activities	0	0