

Course title Ochrona przechowywanej żywności / Protection of the stored food		ECTS code 13.3.0512	
Name of unit administrating study Faculty of Chemistry			
Studies			
Field of study	Type	Form	
Chemistry	Bachelor	Full-time studies	
Teaching staff Dr hab. Marek Gołębiowski, prof. nadzw.			
Forms of classes, the realization and number of hours		ECTS credits 1	
A. Forms of classes, in accordance with the UG Rector's regulations lecture		classes - 15 h tutorial classes – 2 h student's own work – 8 h	
B. The realization of activities in-class learning		Total: 25 h - 1 ECTS	
C. Number of hours 15 h lecture			
The academic cycle Third year, winter semester			
Type of course obligatory		Language of instruction Polish	
Teaching methods Lecture with multimedia presentation		Form and method of assessment and basic criteria for evaluation or examination requirements	
		A. Final evaluation, in accordance with the UG study regulations course completion (with a grade)	
		B. Assessment methods Written test with open questions	
		C. The basic criteria for evaluation or exam requirements <ul style="list-style-type: none"> • positive evaluation - min. 51% from written exam covering the scope of material realized during lectures • negative evaluation can be improved on the basis of an additional written exam covering the scope of material realized during lectures (at least 51% of possible points) 	
Required courses and introductory requirements Chemistry, Biology Knowledge of basic topics in chemistry and major concepts in biology.			
Aims of education <ul style="list-style-type: none"> • Knowledge of the method of preservation and storage of food • Knowledge of environmental factors influencing on stored food • Knowledge of the principles of food storage • Knowledge about the protection of stored food • Knowledge of choosing the right way to store food 			
Course contents Methods of preserving and storing of food. Types of food preservation methods. Physical methods of food preservation. Chemical methods of food preservation. Biological methods of food preservation. Preserving food with unconventional methods. Food storage. The influence of environmental factors on stored food. Changes in food during storage. The basic principles of food storage. Protection of stored food against rodents, cockroaches, flies, ants, storage pests, birds and other vertebrates. Packaging, storage and transport of food. Control and evaluation of food quality			

Bibliography of literature

A. Literature required to pass the course

Ewa Czarniecka-Skubina. Technologia żywności. Wydawnictwo: AB format 2010
Lehari Gabriele. Przechowywanie i konserwowanie żywności. MULTICO 2006
Danuta Kołożyn-Krajewska, Tadeusz Sikora, Mieczysław Skrzypek. Towaroznawstwo, WSiP, Warszawa 1999.
Kumirska J., Gołębiowski M., Paszkiewicz M., Bychowska A. Analiza żywności, Wydawnictwo UG, Gdańsk 2010
A.2. studiowana samodzielnie przez studenta
Ewa Czarniecka-Skubina. Technologia żywności. Wydawnictwo: AB format 2010
Lehari Gabriele. Przechowywanie i konserwowanie żywności. MULTICO 2006
Danuta Kołożyn-Krajewska, Tadeusz Sikora, Mieczysław Skrzypek. Towaroznawstwo, WSiP, Warszawa 1999.
Kumirska J., Gołębiowski M., Paszkiewicz M., Bychowska A. Analiza żywności, Wydawnictwo UG, Gdańsk 2010

B. Extracurricular readings

Gruda Z., Postolski J.: „Zamrażanie żywności”. Warszawa 1985.
Praca zbiorowa pod redakcją Klepacka M. Analiza żywności, Fundacja Rozwój SGGW, Warszawa 2005.
Ewa Hanna Lada. Podstawy przetwórstwa spożywczego. WSiP, Warszawa 2008
Danuta Kołożyn-Krajewska, Tadeusz Sikora - 2004. Towaroznawstwo żywności. WSiP 2004.

Knowledge

1. The student knows and describes the basic methods used to protect stored food
2. The student can indicate the main health risks resulting from improper storage of food.
3. The student knows the basic principles of protection of stored food.
4. The student knows what changes are in food during storage
5. Understands the basic topics related to the control and evaluation of food quality.

Skills

1. The student demonstrates the ability to evaluate the methods used to protection of stored food
2. The student demonstrates the ability to propose methods used to protection of stored food
3. Student evaluates the methods used to protection of stored food
4. Student formulates opinions about the protection of stored food

Social competence

1. The student understands the need to learn
2. The student discusses about the protection of stored food
3. The student explains the negative health effects caused by improper food storage
4. The student promotes the importance of protection of stored food.
5. The student consciously evaluate the conditions of the protection of stored food