

Course name: Food safety and quality management

ECTS	5.0
Course status	basic, obligatory
Course final assessment /evaluation of outcomes	Exam
Prerequisite	No prerequisites

Main field of study:

Educational profile	General academic
Code of studies and education level	Bachelor / Master
Semester of studies	winter
Language of instruction	English

Course offered by:

Name of faculty offering the course	Faculty of Food Technology
Name of department offering the course	Department of Plant Products Technology and Nutrition Hygiene
Course coordinator	dr hab. inż. Piotr Gębczyński, prof. URK

Learning outcomes:

Symbol of outcome	Description of the learning outcome	Reference to main field of study outcomes	Area symbol*
KNOWLEDGE – student knows and understands			
ZBJ_W1	physical, chemical and microbiological hazards in food and ways to control them (good practice systems - GxP, HACCP, ISO 22000), rules and stages of implementing the HACCP system and ISO 22000 standards	TŻ1_W09	RT
ZBJ_W2	the ISO 9000 standard, the structure and method of creating the Quality Manual, the principles of documenting quality management systems	TŻ1_W09	RT
SKILLS – student is able to			
ZBJ_U1	develop the essential elements of the HACCP system, including: selecting members of an interdisciplinary team, preparing a description of the product covered by the system and determining its intended use, developing a flow diagram, identifying potential hazards and analysing them to designate a CCP, select an exemplary monitoring method and corrective actions for to the selected CCP and record the above in the form of HACCP documentation.	TŻ1_U03 TŻ1_U05 TŻ1_U11	RT
ZBJ_U2	develop a manual for a selected action and a procedure for an example process and construct a Quality Manual.	TW1_U03	RT
SOCIAL COMPETENCIES – student is ready to:			
ZBJ_K1	work in a team, taking on different rules in it, skilfully manages time,	TŻ1_K02	RT
ZBJ_K2	inform the public about activities related to the production of safe food	TŻ1_K05	RT

Teaching contents

Lectures	30 hours
Topics	Development of food safety research, Codex Alimentarius, food safety systems - GMP, GHP, HACCP. Food hazards.
	HACCP system principles, HACCP system implementation stages, and how to develop the HACCP system.

	Documentation in the HACCP system, audit, application of the HACCP system at various stages of the food chain, ISO 22 000 standard
	Stages and concepts in quality management, principles, methods and tools in quality management.
	Quality systems according to ISO 9000. Implementation of quality systems. Process approach during development, implementation and improvement. Certification.
	Quality book, documentation. ISO 15161 standard.
	Principles of food law, EU regulations on food safety, contamination, adulteration, food labelling, and food control.
Accomplished learning outcomes	ZBJ_W1; ZBJ_W2; ZBJ_K2
Means of verification, rules and criteria of assessment	Written exam; for a positive assessment, students should provide at least 51% of correct answers to the questions. Exam participates in 50% of the subject's final grade.
Classes:	15 hours
Topics	Arrangement of the HACCP team, defining (describing) the product, determining the intended use of the product, drawing up a flow diagram, and verifying the chart based on the prepared plan of the production part.
	Preparation of a list of hazards for each stage of the technological process, a list of control and preventive measures and an assessment of risks using a priority analysis.
	Establishment of Critical Control Points (CCPs). For the selected CCP, setting the monitoring parameters, critical limits and the method of the monitoring system, developing documentation of the actions taken.
	Ways of preparing instructions, writing a sample instruction.
	The structure and methods of formulating procedures, writing an example procedure. The form and ways of constructing the quality book.
Accomplished learning outcomes	ZBJ_U1; ZBJ_U2; ZBJ_K1; ZBJ_K2
Means of verification, rules and criteria of assessment	Students pass exercises based on: - team (in subgroups) preparation of a project covering elements of the HACCP system - share in the final module evaluation - 25%, - team (in subgroups) practice of the draft procedure and instructions - share in the final module evaluation - 25%.

References:

Basic	1. Codex Alimentarius. 2021. General principles of food hygiene. CXC 1-1969 Adopted in 1969. Amended in 1999. Revised in 1997, 2003, 2020 https://www.fao.org/fao-who-codexalimentarius/en/ 2. Cochran C. ISO 9001:2015 in Plain English. Paton Professional. Chico, USA (book available from the course coordinator)
Supplementary	1. Mortimor S., Wallace C. 2013. HACCP. A practical approach. Springer (The book is available at the University's Main Library (e-resources) or from the course coordinator). 2. Mukherjee S.P. 2019. Quality. Domains and dimensions. Springer (The book is available at the University's Main Library (e-resources) or from the course coordinator)

Structure of learning outcomes

Area of academic study: R – Agricultural, forestry and veterinary sciences	ECTS **
Area of academic study: T – technological sciences	5,0 ECTS**

Structure of student activity

Contact hours	49	hrs.	2.0 ECTS**
Including:			
lectures	30	hrs.	
classes and seminars	15	hrs.	
consultations	2	hrs.	
participation in research	0	hrs.	

obligatory traineeships	0	hrs.		
participation in examination	2	hrs.		
e-learning	0	hrs.	0.0	ECTS**
student own work	76	hrs.	3.0	ECTS**

*Areas of academic study in the fields of: H- humanities; S - social studies; P – biological sciences; T – technological sciences; M- medical, sport and health sciences; R – Agricultural, forestry and veterinary sciences; A – the arts

** stated with an accuracy to 0.1 ECTS, where 1 ECTS = 25 - 30 hours of classes