

SUBJECT DESCRIPTION

1. Information on the study programme

1.1 The institution of higher education	UNIVERSITY OF ORADEA
1.2 Faculty	FACULTY OF ENVIRONMENTAL PROTECTION
1.3 Department	FOOD PRODUCT ENGINEERING
1.4 Field of study	FOOD PRODUCT ENGINEERING
1.5 Cycle of study	BACHELOR
1.6 Program of study/Qualification	CONTROL AND EXPERTISE OF FOOD PRODUCTS/ENGINEER

2. Information on the discipline

2.1 Name of discipline				HYGIENE OF UNITS IN THE FOOD INDUSTRY				
2.2 Course holder				LECTURER PhD LUCIAN BARA				
2.3 Seminar/Laboratory/Project holder				LECTURER PhD GIANI BURA				
2.4 Year of study	3	2.5 Semester	V	2.6 Type of evaluation	EX	2.7 Regimen of the subject	C	

(C) Compulsory; (O) Optional; (E) Elective

3. Total estimate time (hours per semester of didactic activities)

3.1 Number of hours per week	3	out of which: 3.2 course	2	out of which 3.3 laboratory	1
3.4 Total hours from the curriculum	42	Of which: 3.5 course	28	out of which 3.6 laboratory	14
Time allotment					58
Study assisted by manual, course support, bibliography and notes					10
Additional documentation in the library/ on specialised electronic platforms and in the field					10
Preparation of seminars/laboratories/ topics/reports, portfolios and essays					20
Tutorship					16
Examinations					2
Other activities.....					-
3.7 Total hours of individual study	58				
3.9 Total hours per semester	100				
3.10 Number of credits	4				

4. Prerequisites (where appropriate)

4.1 curriculum	Knowledge of: General Microbiology, Agri-Food Microbiology, Agri-Food Biochemistry, Agri-Food Toxicology.
4.2 competences	Manipulation of biological samples in safe conditions for the user.

5. Conditions (where appropriate)

5.1. related to course	The course room equipped with video projector; internet connection.
5.2. related to laboratory	Laboratory equipment: optical microscope, sample homogenizer, pH meter, UV lamp, related equipment (autoclave machine, oven, laminar flux), specific utensils (inoculation loops, pipettes).

6. Specific competences acquired

Professional competences	<p>C1.1 Description and use of basic concepts, theories and methods for food engineering on the structure and properties of food components and contaminants, the transformations that they undergo during processing, the devices, equipment and technologies in food industry (knowledge provided by disciplines such as: general, inorganic, organic chemistry, food chemistry, biophysics, biochemistry, physical and colloidal chemistry, devices, equipment and technologies in the food industry)</p> <p>C1.2 Explanation and interpretation of concepts, processes, models and methods in food engineering using basic knowledge on the food component properties and changes, technological processes and basic equipment in food industry</p> <p>C1.4 Assessment of the characteristics, performance and limits of some technological processes and installations in the food industry</p> <p>C4.3 Application of basic principles and methods used in the food quality control for solving the problems related to food analysis and food quality assurance.</p> <p>C5.4 Assessment of the characteristics, performance and limitations of some methods and equipment used in food expertise</p>
Transversal competences	<p>CT1 Applying strategies of perseverance, rigor, efficiency and accountability in the work, punctuality and accountability for the results of personal activities, creativity, common sense, analytical and critical thinking, problem solving, etc., based on the rules and principles of professional ethics code values in the food sector.</p> <p>CT2 Applying networking techniques within a team, enhancement and shaping of empathic capacities of interpersonal communication and ownership of some specific tasks in the group activity to treat / solve individual / group conflict, as well as the optimal management of time.</p> <p>CT3 Efficient use of various ways and learning/ training techniques to acquire the information from electronic and bibliographic databases both in Romanian and in an international language, as well as to evaluate the need and usefulness of extrinsic and intrinsic motivation of continuing education.</p>

7. Objectives of discipline (coming from the specific competences acquired)

7.1 General objective	Knowledge of methods and techniques of hygienic control in order to analyse food processing.
7.2 Specific objectives	Knowledge the hygiene rules for the food product safety, the veterinary legislation, the hygiene rules for trading and storage space; the hygiene rules for the product displayed and sold; the rules of individual hygiene.

8. Contents*

8.1 Course	Methods of teaching	No. of hours
Hygiene of drinking water.	Interactive conversation; video presentation; oral exposure.	2
Hygiene of non-alcoholic beverages.	Interactive conversation; video presentation; oral exposure.	2
Hygiene of alcoholic beverages. Beer hygiene.Wine hygiene. The hygiene of strong alcoholic beverages.	Interactive conversation; video presentation; oral exposure.	2
Hygiene of sugar.	Interactive conversation; video presentation; oral exposure.	2
Hygiene of honey.	Interactive conversation; video presentation; oral exposure.	2

Hygiene of meat - hygiene of pork; hygiene of poultry meat; beef hygiene; hygiene of game meat.	Interactive conversation; video presentation; oral exposure.	2
Hygiene of meat products.	Interactive conversation; video presentation; oral exposure.	2
Hygiene of fishery products.	Interactive conversation; video presentation; oral exposure.	2
Hygiene of eggs and egg products.	Interactive conversation; video presentation; oral exposure.	2
Milk hygiene.	Interactive conversation; video presentation; oral exposure.	2
Hygiene of dairy products.	Interactive conversation; video presentation; oral exposure.	2
Fruits hygiene.	Interactive conversation; video presentation; oral exposure.	2
Vegetables hygiene.	Interactive conversation; video presentation; oral exposure.	2
Flush hygiene. Bread hygiene. Bakery products hygiene.	Interactive conversation; video presentation; oral exposure.	2
Bibliography Bara Camelia, <i>Food Microbiology</i> , Oradea, Oradea University Press, 2005. Bara Camelia, <i>Principles of appreciating the quality of some foods</i> , Oradea, Oradea University Press, 2008. Bara Camelia, <i>Microbiology and quality of food of animal origin</i> , Oradea, Oradea University Press, 2008. Apostu Sorin, <i>Food Microbiology, vol. II</i> , Cluj-Napoca, Risoprint Publishing House, 2006. Bara, L., Onet, C., <i>Food Hygiene</i> , Oradea, Oradea University Press, 2009. Ionuț, C., et al., <i>Hygiene of Nutrition</i> , Cluj-Napoca, Medical University Publishing House Iuliu Hațieganu, 2001. Bara, V., Onet, C., <i>Hygiene Guide for Food Industry Units</i> , Oradea, Oradea University Press, 2008.		
8.2 Seminary	-	-
8.3 Laboratory	Methods of teaching	No. of hours
Hygienic drinking water test in lab.	Presentation, description, observation, demonstration, directed learning.	1
Hygienic examination of non-alcoholic beverages in lab.	Presentation, description, observation, demonstration, directed learning.	1
Hygienic examination of alcoholic beverages in lab.	Presentation, description, observation, demonstration, directed learning.	1
Hygienic examination of sugar in lab.	Presentation, description, observation, demonstration, directed learning.	1
Hygienic test of honey in lab.	Presentation, description, observation, demonstration, directed learning.	1

Hygienic examination of meat in lab.	Presentation, description, observation, demonstration, directed learning.	1
Hygienic examination of meat products in lab.	Presentation, description, observation, demonstration, directed learning.	1
Hygienic test of fishery products in lab.	Presentation, description, observation, demonstration, directed learning.	1
Hygienic examination of eggs and egg products in lab.	Presentation, description, observation, demonstration, directed learning.	1
Hygienic examination of milk in lab.	Presentation, description, observation, demonstration, directed learning.	1
Hygienic test of dairy products in lab.	Presentation, description, observation, demonstration, directed learning.	1
Hygienic examination of fruits in lab.	Presentation, description, observation, demonstration, directed learning.	1
Hygienic examination of vegetables in lab.	Presentation, description, observation, demonstration, directed learning.	1
Hygienic examination of flour and bread in lab.	Presentation, description, observation, demonstration, directed learning.	1

Bibliography

Oneț, C., Oneț Aurelia, *Hygiene of Food Units: practical papers*, Oradea, Oradea University Press, 2006.
Piscoi, P., Rusen, G., Tudor, L., *Guide to Good Hygiene and Production Practices for the Meat Processing Sector*, Bucharest, Agricultural Publishing House, 2006.
Bara Camelia, *Practical work of microbiology*, Oradea, Oradea University Press, 2009.
Bara, V., Chipurici, M., Zabik, A., Bara C., Nechita Derevenco, R., Paul, G., Bonta, M., *General methods of practical microbiology*, Oradea, Oradea University Press, 2000.
Bara Vasile, Bara Camelia, Pop Constantin, *Applied microbiology techniques*, Oradea, Oradea University Press, 1998.

* The content, respectively the number of hours allocated to each course / seminar / laboratory / project will be detailed during the 14 weeks of each semester of the academic year.

9. Corroboration of discipline content with the expectations of the epistemic community, professional associations and representative employers from the field corresponding to the study programme

Permanent sanitary monitoring of the technological flow, from the raw material to the finished and immediately consumable product; ensure and guarantee the quality of agri-food products, based on knowledge of hygiene and food technology; ensuring food security, in order to protect and ensure the health of the human consumers. Operation and design of process monitoring and automation systems in the food industry and in the food quality control and food expertise laboratories, using basic concepts, theories and methods specific to this field.

10. Evaluation

Type of activity	10.1 Evaluation criteria	10.2 Evaluation methods	10.3 Share in the final grade
10.4 Course	- for grade 5 - 50% knowledge of the subject for grade 6 - 60% knowledge of the subject	Summative assessment - exam - written or oral test	70%

	for grade 7 - 70% knowledge of the Summative assessment - exam - written or oral test 70% subject for grade 8 - 80% knowledge of the subject for grade 9 - 90% knowledge of the subject for grade 10 - knowledge of the subject in proportion of 100% (the student proves the consultation of the presented bibliographic material).		
10.5 Seminary			
10.6 Laboratory	for grade 5 - the student answers 50% of the questions correctly for grade 6 - the student answers 60% of the questions correctly for grade 7 - the student answers 70% of the questions correctly for grade 8 - the student answers 80% of the questions correctly for grade 9 - the student answers 90% of the questions correctly for grade 10 - the student answers 100% of the questions correctly	Practical evaluation	30%
10.7 Project			
10.8 Minimum standard of performance			
<p>Accomplishment of analyzes and food quality control using the basics of compound chemistry that determine food quality and transformations that they undergo during their processing, transport and storage as well as concepts, theories, methods and basic apparatus in the field.</p> <p>Accomplishment of food surveying, using the basics of compound chemistry that determine the food quality and traceability, the transformations that they undergo during their processing, transport and storage, and analysis and determination methods of these compounds, the concepts, theories and legislation in the field.</p>			

Date of completion Signature of course holder**

01.10.2023 Lecturer PhD Lucian Bara
baralucian@yahoo.com

Signature of seminar
laboratory/project holder **

Lecturer PhD Giani Bura

Date of approval in the department

01.10.2023

Signature of the Head of Department

Lecturer eng. PhD Adrian Timar
atimar@uoradea.ro

Dean signature

Assoc.prof. PhD Cristina Maerescu

** - Name, first name, academic degree and contact details (e-mail, web page, etc)will be specified.

.....