

# SUBJECT CARD (SYLLABUS)

## Description of the subject

Subject code		Subject	Wykład monograficzny II		
BiJPŻ/P/I/NST/44			Monographic lecture II		
Lecture language		Polish			
Academic year		2021/2022			
Field of study		Safety and Quality of Food Production			
Within the scope of		---			
Level of the studies		first cycle			
Profile of the studies		practical			
Form of the studies		full-time			
Semester / semesters		VI			
Membership of the group of classes		B2 Group of directional classes – not obligatory			
Status of the subject		Optional			
Forms of realization of didactic classes, assessment, ECTS points		Form of the classes	Number of didactic hours	Number of ECTS points	
		Lecture	30 [h]	4 ECTS	
Connection of the subject	with the profile of the studies	Shapes the practical skills			2,0 ECTS
	with the entitlements	Its purpose is to acquire engineering competences by the student			2,0 ECTS
	with discipline	Chemical engineering Food and nutrition technology Management and quality sciences			2,0 ECTS 1,0 ECTS 1,0 ECTS
Form of teaching		Traditional - classes organized at the University or classes carried out with the use of distance learning methods and techniques			
Preliminary requirements		All students of the Safety and Quality of Food Production.			
University		Faculty of Chemical Engineering and Commodity Science, Department of Environmental Engineering and Chemistry			
Coordinator		dr hab. inż. Paweł Religa			
Website		www.wicit.uniwersytetradom.pl			
E-mail address, coordinator’s phone number		p.reluga@uthrad.pl 48 361 7583			

## RESULTS OF STUDYING, PROGRAMME CONTENT, CONDUCT OF DIDACTIC CLASSES, VERIFICATION OF THE RESULTS OF STUDYING

Education aim:	The aim of the course is to familiarize students with the basic issues of collagen chemistry, including the properties and application for food purposes.
Programme content:	<p>Lecture:</p> <p>Structure and properties of collagen. Histological structure of the skin. Qualitative and quantitative determination of collagen. Determination of the amino acid composition. Amino acids included in collagen. Bindings in collagen. Chemical reactivity of collagen. Collagen dehydration. Interaction between collagen and acids and bases / collagen swelling, isoelectric point /. Collagen contraction. Collagen content in the animal system. Collagen extraction. Characteristics of collagen from fish and mammals. Collagen types. Collagen as a tanning raw material. Leather tanning - the essence</p>

	and goals of the expedition processes. Production of protein casings for sausages. Collagen hydrolysis - production of gelatin and glue. Absorption of collagen present in natural food. Methods of obtaining and using collagen and protein hydrolysates in medicine, pharmaceutical, cosmetic and food industries. Test.
Didactic (education) methods:	<ul style="list-style-type: none"> <li>– informative lecture</li> <li>– didactic discussion</li> <li>– practical methods (demonstration, exercises, multimedia presentations)</li> </ul>
Pass discipline, evaluation criteria of the achieved learning results, calculation method of the final mark:	The condition for completing the course is achieving all the required learning outcomes specified for the course. Obtaining positive grades from all forms of classes included in a given course is tantamount to completing it and obtaining by the student the number of ECTS points assigned to this course. The method of calculating the final grade for the course is specified in the study regulations.

Results of learning a given subject in respect of direction effect and the form of the classes				Methods of verification of the results of learning	
Number of the result of learning	Description of the results of learning for a given subject Student, who passed a given subject knows and understands/ is able to/ is ready to:	Direction effect of learning	Form of classes	Form of verification (passes)	Methods of verification and assessment
W1	The student knows the concept of risk and safety risk assessment resulting from the use of collagen in food products,	K_WG05	lecture	Written test / oral answer	written exam
W2	The student knows and understands the development trends in the field of collagen processing for the improvement of food safety and quality, taking into account the idea of sustainable development.	K_WK07	lecture	Written test / oral answer	written exam

Literature and scientific support
<p>Basic literature:</p> <ol style="list-style-type: none"> <li>1. Reich G.: Kolagen - zarys metod, wyniki i kierunki badań. WNT, Warszawa 1970</li> <li>2. Lasek W.: Kolagen - chemia i wykorzystanie WNT, Warszawa 1978</li> <li>3. Baticzek SA, Liedzjewirow AM. Kolagen. Nowa strategia zachowania zdrowia i przedłużenia młodości. Wyd. Kejtii, Koleczkowo 2010</li> <li>4. Fratzl P. Collagen. Structure and Mechanics. Springer, New York 2008</li> </ol> <p>Supplementary literature:</p> <p>JALCA, JSLTC, Przegląd Włókienniczy, Żywność. Nauka. Technologia. Jakość”, International Food Research Journal.</p> <p>Journals: Food Chemistry. LWT -Food Science and Technology,</p>

Amount of student's labour necessary to achieve the assumed effects of learning – ECTS points balance			
Participation in the classes, activity	Student's burden [h]		
	Other contact hours	Classes without teachers - student's own work	Didactic classes
Participation in lectures	X	X	30 [h]
Participation in practical classes	X	X	X
Participation in consultations	10 [h]	X	X
Preparation for the classes Preparation for the pass	X	60 [h]	X
Summary student's workload	10 [h]/ 0,4 ECTS	60 [h]/2,4 ECTS	30 [h]/ 1,2 ECTS
ECTS points for a subject	4 ECTS		

Additional information, notes

