



NARODOWA AGENCJA
WYMIANY AKADEMICKIEJ

Programme of the degree course:

INTERDISCIPLINARY BIOECONOMY STUDIES

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1. Description of the studies programme

Description of the study program	
University unit:	
Faculty of Agriculture and Economics	
Field of studies:	Interdisciplinary Bioeconomy Studies
ISCED Classification	088
Level code of the Polish Qualifications Framework	P7S
Study cycle	Second cycle
Profile	General academic
Form or forms of study	Stationary
Professional title awarded to graduates	Master
Language of lecture	Englishi
Field of science and scientific discipline or artistic discipline	<i>leading discipline: field of agricultural sciences, agriculture and horticulture discipline 54% (RR)</i>
	<i>field of social sciences, discipline of economics and finance 46% (SE)</i>
Number of semesters	4
The number of ECTS points necessary to complete studies at a given level	120
The total number of ECTS credits that a student must acquire in courses with the direct participation of academic teaching staff or other persons who organise courses	61,8
The total number of ECTS points that a student must obtain in courses in the humanities or social sciences	5
Total number of hours	1295
The share of classes carried out in the study program by academic teachers and employees employed at the University as their primary place of work	95%

Justification for the creation of studies

<p>Education concept</p>	<p>The study programme fits in with the URK 2021-2025 strategy by implementing the values contained in the advertising slogan "The best of nature". It is closely linked to the creation of innovative fields of study and the internationalisation of universities, as the aim of its introduction is to attract international students.</p> <p>The dependence of economies on non-renewable resources and the environmental problems caused by a linear approach to production and consumption pose challenges on which the existence of future generations depends. To overcome these challenges and shift the economy to a low- or zero-emission mode, where the exploitation of non-renewable resources is phased out, a new look at production and resources is needed. Interdisciplinary bioeconomy studies are based on the principles of respect for the environment and natural resources while focussing on the fulfilment of social needs. The circular bioeconomy, which is the subject of these studies, makes it possible to replace conventional refined products with biorefinery products, to fully utilise the potential of biological raw materials through a cascade approach, which increases economic efficiency and reduces the ecological footprint. It frees states and businesses from natural monopolies for extractive raw materials. Process and product innovations in biorefineries have great potential for a long-term drop in prices due to their inexhaustibility, in contrast to the prices of conventional refined products. The circular bioeconomy also strengthens food security. In this way, it supports the achievement of all Sustainable Development Goals.</p>
<p>Outline of the graduate's profile and professional qualifications</p>	<p>The aim of the IBS is to train a graduate who is aware of natural limits and societal needs, who understands the potential of biomass, the process of its creation and the challenges involved. They know how to utilise biological resources, what processes to use to exploit their full potential and how to convert the remaining by-product into a fully-fledged product to close the cycle of matter in the economy and nature. Training in the IBS programme takes place in three thematic blocks:</p> <ul style="list-style-type: none"> - Socio-economic context: the student learns about the contemporary economic and social context of the bioeconomy and is given tools to understand the principles of production, industry operation and project implementation. An important element of the programme is the promotion of creative thinking and the mandatory design thinking workshops. - The context of the circular economy: The student learns about the different levels of the material cycle in the economy and the environment: from the principles of sustainable primary production to the processing of biomass in biotechnological processes and the recovery of nutrients. In simple words, he knows how to grow a plant in a way that does not jeopardise the natural environment, he knows what can be made from it and what can be made from the waste generated in the production process, and finally, how to use the residues to produce compost for subsequent crops. - In-depth production context: The student will learn detailed processes, methods and directions of processing biomass into non-food commodities, including bioplastics, biofuels and cosmetics.
<p>Employment opportunities</p>	<p>IBS graduates have knowledge of the production processes in the bioeconomy and understand their economic interrelationships both at the level of the overall economy and the activities of individual economic units. Depending on the profile of their competences, they can choose elective subjects to develop their career paths towards consultancy, designing the value chain in the bioeconomy, working for institutions that implement sustainable development policies, and towards the production and processing of biological resources.</p>
<p>Further education opportunities</p>	<p>IBS graduates know that they need to continue their education. The core curriculum enables you to manage further development and, thanks to suitable</p>



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	study/postgraduate programmes, to develop your knowledge, skills and competences in social areas (management, consultancy) or in relation to production processes and the quality of biomass and bio-based products. Thanks to their interdisciplinary knowledge, graduates can continue their training within the Doctoral School.
Requirements for candidates for studies	Completed first-cycle studies in agricultural, engineering, technical or social sciences. Knowledge of English at least B2 level.

2. Description of the learning outcomes

Description of the learning outcomes implemented by the study program			
Study field	Interdisciplinary Bioeconomy Studies		
Study cycle: second			
Study profile: general academic			
Form of the studies: stationary, MA			
Description component code	Description	Effect reference	
		PRK*	Discipline
KNOWLEDGE – the student knows and understands:			
IBS_W01	in-depth concepts and problems of agricultural and related sciences in relation to the production of renewable biological resources and their utilisation while respecting the principles of sustainable development	P7U_W P7S_WG P7S_WK	RR, SE
IBS_W02	complexity of natural phenomena and natural and biotechnological processes that occur and are used in the bioeconomy	P7U_W P7S_WG	RR, SE
IBS_W03	principles of the functioning of living organisms at different levels of organisation and possibilities for their use in the bioeconomy	P7U_W P7S_WG	RR, SE
IBS_W04	characteristics of the different types of biomass and modern technological processes related to the processing of biomass and bioproducts	P7U_W P7S_WG P7S_WK	RR, SE
IBS_W05	threats to the functioning of the bioeconomy and threats and risks associated with the implementation of the bioeconomy	P7U_W P7S_WG P7S_WK	RR, SE
IBS_W06	factors determining the development and functioning of the bioeconomy, with a special focus on rural areas	P7U_W P7S_WK	RR, SE
IBS_W07	advanced certification and quality assessment systems, other characteristics of biomass, biomass and bioproduct production systems, with a particular focus on environmental impact	P7U_W P7S_WG	RR, SE
IBS_W08	principles for designing and analysing the results of scientific experiments that enable a better understanding of the phenomena occurring in the bioeconomy and their mutual interactions	P7U_W P7S_WG P7S_WK	RR, SE

IBS_W09	environmental issues and planetary boundaries as well as changes in the socio-economic structure resulting from the assumed management paradigm and the relationships between environment, economy and society	P7U_W P7S_WG P7S_WK	RR, SE
IBS_W10	concepts and problems of the modern economy and society, with a particular focus on the problems of the circular bioeconomy	P7U_W P7S_WG P7S_WK	RR, SE
IBS_W11	the evolutionary nature of the economy and the specificity of the circular economy, with particular reference to biological flows	P7U_W P7S_WG P7S_WK	RR, SE
IBS_W12	at an advanced level, principles, directions and tools for the implementation of a sustainable development economy	P7U_W P7S_WG P7S_WK	RR, SE
IBS_W13	at an advanced level, economic and institutional conditions of the bioeconomy in a global context, macro-region, region	P7U_W P7S_WG P7S_WK	RR, SE
IBS_W14	the functioning of companies and the behaviour of economic entities	P7U_W P7S_WG P7S_WK	RR, SE
IBS_W15	specificity and features of the biomass and bioproducts market	P7U_W P7S_WG P7S_WK	RR, SE
IBS_W16	in-depth principles of management in the bioeconomy, taking into account the principles of professional ethics	P7U_W P7S_WG P7S_WK	RR, SE
IBS_W17	principles of sustainable production of primary and secondary biomass	P7U_W P7S_WG P7S_WK	RR, SE
IBS_W18	in-depth questions on the natural environment and environmental protection	P7U_W P7S_WG P7S_WK	RR, SE
IBS_W19	Values underlying social and economic development and the conditions shaping them	P7U_W P7S_WK	RR, SE
IBS_W20	the importance of the innovative nature of the bioeconomy and the related principles of industrial property and copyright protection	P7U_W P7S_WK	RR, SE
SKILLS – the student is able to:			

IBS_U01	independently plan experiments in the field of bioeconomy and interpret their results	P7U_U P7S_UW, P7S_UU	RR, SE
IBS_U02	design a production process/produce bio-based products	P7U_U P7S_UW, P7S_UO	RR, SE
IBS_U03	designing, implementing and modifying methods/technologies for the bioeconomy	P7U_U P7S_UW, P7S_UO	RR, SE
IBS_U04	assess the quality, properties and functionality of biomass and biomaterials	P7U_U P7S_UW, P7S_UO	RR, SE
IBS_U05	assess the environmental, social and economic impact of production systems and products	P7U_U P7S_UW, P7S_UO	RR, SE
IBS_U06	monitor and implement the biomass production in line with the principles of sustainable development	P7U_U P7S_UW, P7S_UO	RR, SE
IBS_U07	plan/design a closed biomass cycle at the level of an economic unit and the relationship between entities	P7U_U P7S_UW, P7S_UO	RR, SE
IBS_U08	determine and assess the effects of economic activities and external effects	P7U_U P7S_UW, P7S_UO	RR, SE
IBS_U09	conduct a socio-economic analysis of phenomena/projects related to the area of bioeconomy	P7U_U P7S_UW, P7S_UO	RR, SE
IBS_U10	write and manage a project and define key indicators of the project management process	P7U_U P7S_UW, P7S_UO	RR, SE
IBS_U11	plan an economic strategy for biomass and bio-based products	P7U_U P7S_UW, P7S_UO P7S_UK	RR, SE
IBS_U12	communicate with different people orally and in writing in English	P7U_U P7S_UW, P7S_UK	RR, SE

IBS_U13	use online databases and search engines for scientific publications	P7U_U P7S_UW, P7S_UK	RR, SE	
IBS_U14	prepare written works and presentations on specific issues of the bioeconomy using appropriate theoretical approaches	P7U_U P7S_UW, P7S_UK P7S_UU	RR, SE	
SOCIAL COMPETENCES – the student is ready to:				SOCIAL COMPETENC ES – the student is ready to:
IBS_K01	targeted and responsible further training and organisation of the learning process and the transfer of objective knowledge in the field of bioeconomy	P7U_K P7S_KR P7S_KK	RR, SE	
IBS_K02	coordination of team work, defining goals and priorities and methods of implementing specific tasks	P7U_K P7S_KO P7S_KR	RR, SE	
IBS_K03	responsible reflections on the importance of social, professional and ethical responsibility in the bioeconomy	P7U_K P7S_KO	RR, SE	
IBS_K04	creative cooperation with other people/entities	P7U_K P7S_KO P7S_KR	RR, SE	
IBS_K05	speaking publicly about the bioeconomy and discussing related issues constructively	P7U_K P7S_KK	RR, SE	
IBS_K06	critical reflection on the responsibility, risks and economic, social and environmental impacts of the circular bioeconomy and 'business as usual'	P7U_K P7S_KO P7S_KK	RR, SE	
IBS_K07	communicating knowledge about environmental and socio-economic issues, including climate change and directions of socio-economic development, using reasoned argumentation	P7U_K P7S_KK P7S_KR	RR, SE	
IBS_K08	functioning in a world of information overload and critical evaluation of acquired information	P7U_K P7S_KK	RR, SE	
IBS_K09	conscious pursuit and implementation of the idea of sustainable development	P7U_K P7S_KO	RR, SE	

IBS_K10	consciously recognising the economic potential of biomass and circular processes in the bioeconomy	P7U_K P7S_KK	RR, SE
IBS_K11	planning and implementation of educational and/or scientific strategies	P7U_K P7S_KO	RR, SE

3. Curriculum

Study plan								
Study field:		Interdisciplinary Bioeconomy Studies						
Study cycle: second		Study cycle: second						
Study profile: general academic		Study profile: general academic						
Form of the studies: stationary, MA		Form of the studies: stationary, MA						
Study semester								1
No.	Course	ECTS	Total number of teaching hours	Incl.:				Form of final assessment
				lectures	seminars	recitation classes		
						audithory	specialist	
Obligatory								
1.	Sustainable primary production of biological resources	5	60	25			35	E ¹
2.	Ecosystem protection	5	50	25			25	E
3.	Project management in the bioeconomy	5	60	20			40	E
4.	Proseminar	3	50		50			Z ²
5.	Foreign language	2	30			30		Z

¹ Graded exam

² Graded credit

A	Obligatory total	20	250	70	50	30	100	---
Optional								
1.	Course 1	5	60	30		30		Z
2.	Course 2	5	60	30			30	Z
B	Optional total***	10	120	60	0	30	30	---
C	In a semester, total (A+B)	30	370	130	50	60	130	---
Study semester								
								2
No.	Course	ECTS	Total number of teaching hours	Incl.:				Form of final assessment
				lectures	seminars	recitation classes		
						audithory	special ist	
Obligatory								
1.	Organization and economics of industrial production in the bioeconomy	4	50	25			25	E
2.	Agricultural chemistry and plant nutrition	4	50	20			30	E
3.	Biotechnology and industrial processes in the bioeconomy	4	50	25			25	E
4.	Commodity science and product quality in the bioeconomy	4	50	20			30	E
5.	Design Thinking Workshop	4	50	5		45		Z
A	Obligatory total	20	250	95	0	45	110	---
Optional								
1.	Course 1	5	60	30			30	Z
2.	Course 2	5	60	30		30		Z
B	Optional total***	10	120	60	0	30	30	---

C	In a semester, total (A+B)	30	370	155	0	75	140	---
Study semester								3
No.	Course	ECTS	Total number of teaching hours	Incl.:				Form of final assessment
				lectures	seminars	recitation classes		
						audithor y	specialist*	
Obligatory								
1.	Sustainable developme nt and natural resources economics	5	60	30		30		E
2.	Biofuels and biorefining	5	60	30			30	E
3.	Innovative bio-based materials	5	60	30			30	E
4.	Waste managem ent	5	60	15		40	5	E
A	Obligatory total	20	240	105	0	70	65	---
Optional								
1.	Course 1	5	60	30			30	Z
2.	Course 2	5	60	30		30		Z
B	Optional total***	10	120	60	0	30	30	---
C	In a semester, total (A+B)	30	360	165	0	100	95	---
Study semester								4
No.	Course	ECTS	Total number of	Incl.:			Form of final	
				lectures	seminars	recitation classes		

			teaching hours			audithory	specialist	assessment
Obligatory								
1.	Seminar	6	60		60			Z
2.	Thesis	7						Ocena z Recenzji
3.	Master Thesis Diploma Exam	2	0					E
A	Obligatory total	15	60	0	60	0	0	---
Optional								
1.	Course 1	5	45		45			Z
2.	Course 2	5	45		45			Z
3.	Course 3	5	45		45			Z
B	Optional total**	15	135	0	135	0	0	---
C	In a semester, total (A+B)	30	195	0	195	0	0	---
Total for the study cycle								
No	Specification	ECTS	Total number of teaching hours	w tym:				Total number of exams
				Lectures	Seminar	recitation classes		
						audithory	specialist *	
1.	Total for the study cycle (all courses 185 ECTS)	120	1295	450	245	235	365	12
Incl.:	obligatory	75	800	270	110	145	275	12
	optional	45	495	180	135	90	90	0
2.	Share of the optional courses [%]	37,5%						
3.	Humanities	1. Design Thinking Workshops 4 ECTS (obligatory) 2. Ethics of the economy and environment 5 ECTS (optional) 3. Seminar in the humanities: Economic history 5 ECTS (optional) 4. Seminar: Culture and postmodernism 5 ECTS (optional)						

		5. Seminar: Philosophy of the nature and basics of the natural sciences 5 ECTS (optional)
4.	Contemporary languages	A specialized language course, 2 ECTS in the first semester
)*	Specialist recitation classes includes: laboratory classes, workshops, field classes	
)**	E – graded exam; Z – graded credit; ZAL – non-graded credit	
)***	Provided in the amount to be completed by the student	

OPTIONAL COURSES								
	Course	ECTS	h	Lectures	Seminar	Recitation classes: audithory	Recitation classes: specialist	Form of final assessment
Sem. 1	Anthropopressure	5	60	30		30		Z
	Animal breeding and animal production in the bioeconomy	5	60	30		15	15	Z
	Innovative biopreparations in plant protection	5	60	30			30	Z
	Multifunctional development of rural areas	5	60	30		30		Z
Sem. 2	Soil quality, resources and protection	5	75	30		15	30	Z
	ISO quality auditor	5	60	30		30		Z
	Marketing of an organic farm	5	60	30		30		Z
	Sustainable innovation in the modern world	5	60	30		30		Z
	Global raw material security	5	60	30		15	15	Z
Sem. 3	Dietary supplements of plant origin	5	60	30			30	Z
	Basics of production of biobased cosmetics	5	60	30			30	Z
	Insects as an element of the bioeconomy	5	60	30			30	Z
	Information in ecosystems	5	60	15		45		Z

	Ethics of the economy and environment	5	60	30		30		Z
Sem. 4	Seminar in the humanities: Economic history	5	45		45			Z
	Seminar: Culture and postmodernism	5	45		45			Z
	Seminar: Changes in work processes	5	45		45			Z
	Philosophy of the nature and basics of the natural sciences	5	45		45			Z
	Seminar: Socio-economic dilemmas of the modern world	5	45		45			Z

4. ECTS balance sheet

ECTS balance sheet							
Study field:		Interdisciplinary Bioeconomy Studies					
Study cycle:		Second					
Study profile:		General academic					
Study semester							1
No.	Course	ECTS	Incl.			In direct contact	Classes* related to scientific activities conducted at the University
			In a discipline (code)				
			RR ³	SE ⁴	...		
Obligatory							
1.	Sustainable primary production of biological resources	5	4	1		2,6	5
2.	Ecosystem protection	5	3	2		3	5
3.	Project management in the bioeconomy	5	1	4		2,6	5
4.	Proseminar	3	1,5	1,5		2	3
5.	Foreign language	2	1	1		1	0
A	Obligatory total	20	10,5	9,5	0	11,2	18
Optional							
1.	Course 1	5	3	2		2,6	5
2.	Course 2	5	3	2		2,6	5
B	Optional total***	10	6	4	0	5,2	10
C	In a semester, total (A+B)	30	16,5	13,5	0	16,4	28
Study semester							2

³ Agriculture sciences

⁴ Social sciences

No.	Course	ECTS	Incl.			In direct contact	Classes* related to scientific activities conducted at the University
			In a discipline (code)				
			RR	SE	...		
Obligatory							
1.	Organization and economics of industrial production in the bioeconomy	4	1	3		2,2	4
2.	Agricultural chemistry and plant nutrition	4	3	1		2,2	4
3.	Biotechnology and industrial processes in the bioeconomy	4	3	1		2,2	4
4.	Commodity science and product quality in the bioeconomy	4	2	2		2,2	4
5.	Design Thinking Workshop	4	1	3		2,2	0
A	Obligatory total	20	10	10	0	11	16
Optional							
1.	Course 1	5	3	2		2,6	5
2.	Course 2	5	3	2		2,6	5
B	Optional total***	10	6	4	0	5,2	10
C	In a semester, total (A+B)	30	16	14	0	16,2	26
Study semester							3
No.	Course	ECTS	Incl.			In direct contact	Classes* related to scientific activities conducted at the University
			In a discipline (code)				
			RR	SE	...		
Obligatory							

1.	Sustainable development and natural resources economics	5	1	4		2,6	5
2.	Biofuels and biorefining	5	3	2		2,6	5
3.	Innovative bio-based materials	5	4	1		2,6	5
4.	Waste management	5	3	2		2,6	5
A	Obligatory total	20	11	9	0	10,4	20
Optional							
1.	Course 1	5	3	2		2,6	5
2.	Course 2	5	3	2		2,6	5
B	Optional total***	10	6	4	0	5,2	10
C	In a semester, total (A+B)	30	17	13	0	15,6	30
Study semester							
							4
No.	Course	ECTS	Incl.			In direct contact	Classes* related to scientific activities conducted at the University
			In a discipline (code)				
			RR	SE	...		
Obowiązkowe							
1.	Seminar	6	4	2		2,6	6
2.	Thesis	7	6	1		3	7
3.	Master Thesis Diploma Exam	2	2	0		2	2
A	Obligatory total	15	12	3	0	7,6	15
Fakultatywne							
1.	Course 1	5	1,5	3,5		2,0	2,5
2.	Course 2	5	1,5	3,5		2,0	2,5
3.	Course 3	5	1,5	3,5		2,0	2,5
B	Optional total***	15	4,5	10,5	0	6	7,5

C	In a semester, total (A+B)	30	16,5	13,5	0	13,6	22,5
Total for the study cycle							
Lp.	Specification	ECTS	Incl.			In direct contact	Classes* related to scientific activities conducted at the University
			discipline (code)				
			RR	SE	...		
A	Total for the study cycle	120	66	54	0	61,8	106,5
B	Classes related to scientific activities conducted at the University [%]						89%
C	Classes in direct contact [%]						51%
D	ECTS structure by discipline [%]		55%	45%			
)*	For the practical education profile - "developing practical skills", and for the general academic profile - "related to the scientific activities conducted at the University"						
)**	Given in the amount implemented by the student						
)***	Given in the amount implemented by the student. It does not apply to fields of study that are assigned to disciplines within the fields of social sciences or humanities						

5. Staffing

Staff				
No	Course	Coordinator	Other teachers	Faculty / Cathedra
Semester 1				
	Sustainable primary production of biological resources	Dr hab. Inż. Agnieszka Klimek-Kopyra, prof. URK		Faculty of Agriculture and Economics, Department of Agroecology and Plant Production
	Ecosystem protection	Dr hab. inż Anna Gorczyca, prof. URK		Faculty of Agriculture and Economics, Department of Microbiology and Biomonitoring
	Project management in the bioeconomy	Dr Barbara Kielbasa	Mgr Katarzyna Piecuch, mgr Wojciech Przywała	Faculty of Agriculture and Economics, Department of Management and Business Economics
	Anthropopressure	Dr hab. inż Anna Gorczyca, prof. URK		Faculty of Agriculture and Economics, Department of Microbiology and Biomonitoring
	Animal breeding and animal production in the bioeconomy	Prof. dr hab. Joanna Makulska	Dr inż. Marcin Kopyra	Faculty of Animal Breeding and Biology, Department of Genetics, Animal Breeding and Ethology
	Innovative biopreparations in plant protection	Dr inż. Marcin Kopyra		Faculty of Agriculture and Economics, Department of Management and Business Economics
	Multifunctional development of rural areas	Dr hab. inż Dariusz Ropek, prof. URK		Faculty of Agriculture and Economics, Department of Microbiology and Biomonitoring
Semester 2				
	Organization and economics of industrial production in the bioeconomy	dr inż. Maciej Gliniak prof. URK	Dr Piotr Wałag	Faculty of Production and Energy Engineering, Department of Bioprocess Engineering, Energy and Automation
	Agricultural chemistry and plant nutrition	Prof. Dr hab. Inż. Jacek Antonkiewicz		Faculty of Agriculture and Economics, Department of Agricultural Chemistry
	Biotechnology and industrial processes in the bioeconomy	Dr hab. inż Anna Gorczyca, prof. URK	Dr hab. inż Maria Chmiel, prof. URK	Faculty of Agriculture and Economics, Department of Microbiology and Biomonitoring
	Commodity science and product quality in the bioeconomy	Dr hab. Inż. Robert Witkiewicz, prof. URK		Faculty of Agriculture and Economics, Department of

				Agroecology and Plant Production
	Design Thinking Workshop	Dr hab. Jakub Piecuch, prof. URK	Mgr Katarzyna Piecuch	Faculty of Agriculture and Economics, Department of Economics and Food Economy
	Soil quality, resources and protection	Dr hab. Inż. Agnieszka Józefowska, prof. URK		Faculty of Agriculture and Economics, Department of Soil Science and Agrophysics
	ISO quality auditor	Dr inż. Marta Czekaj, prof. URK		Faculty of Agriculture and Economics, Department of Management and Business Economics
	Marketing of an organic farm	Dr hab. inż. Marcin Niemiec, prof. URK		Faculty of Agriculture and Economics, Department of Agricultural Chemistry
	Sustainable innovation in the modern world	Dr Joanna Szarek		Faculty of Agriculture and Economics, Department of Economics and Food Economy
	Global raw material security	dr hab. inż. Michał Gąsiorek, prof. URK	dr hab. inż. Tomasz Zaleski, prof. URK	Faculty of Agriculture and Economics, Department of Soil Science and Agrophysics
Semester 3				
	Sustainable development and natural resources economics	Dr Małgorzata Pink	Dr Beata Pater	Faculty of Agriculture and Economics, Department of Economics and Food Economy
	Biofuels and biorefining	dr inż. Maciej Gliniak prof. URK		Faculty of Production and Energy Engineering, Department of Bioprocess Engineering, Energy and Automation
	Innovative bio-based materials	dr inż. Maciej Gliniak prof. URK		Faculty of Production and Energy Engineering, Department of Bioprocess Engineering, Energy and Automation
	Waste management	Prof. Dr hab. Inż. Jacek Antonkiewicz		Faculty of Agriculture and Economics, Department of Agricultural Chemistry
	Dietary supplements of plant origin	Dr. Inż. Barbara Domagała		Faculty of Horticulture and Biotechnology, Department of Horticulture
	Basics of production of biobased cosmetics	Dr. Inż. Barbara Domagała		Faculty of Horticulture and Biotechnology, Department of Horticulture

	Insects as an element of the bioeconomy	Dr hab. inż Dariusz Ropek, prof. URK		Faculty of Agriculture and Economics, Department of Microbiology and Biomonitoring
	Information in ecosystems	Dr Angelika Kliszcz		Faculty of Agriculture and Economics, Department of Agroecology and Plant Production
	Ethics of the economy and environment	Dr Małgorzata Pink	Dr Joanna Szarek	Faculty of Agriculture and Economics, Department of Economics and Food Economy
Semester 4				
	Seminar in the humanities: Economic history	Dr Wanda Łuczak		Faculty of Agriculture and Economics, Department of Economics and Food Economy
	Seminar: Culture and postmodernism	Dr Małgorzata Pink		Faculty of Agriculture and Economics, Department of Economics and Food Economy
	Seminar: Changes in work processes	Dr hab. Jakub Piecuch, prof. URK	Mgr Katarzyna Piecuch	Faculty of Agriculture and Economics, Department of Economics and Food Economy
	Philosophy of the nature and basics of the natural sciences	Dr hab. Inż. Agnieszka Klimek-Kopyra, prof. URK		Faculty of Agriculture and Economics, Department of Agroecology and Plant Production
	Seminar: Socio-economic dilemmas of the modern world	Dr hab. Jakub Piecuch, prof. URK		Faculty of Agriculture and Economics, Department of Economics and Food Economy