Polish name of the course:	Surowce i produkty ekologiczne	ECTS	3
English name of the course:	Raw materials and ecological products		
Name of study	Organic Agriculture and Food Production		

Language: English		Study level: I	
Study status: ☒full-time ☐part-time	Status of the course: ☐ basic ☒ obligatory ☒professional ☐elective	Semester: 3	☒winter semester ☐spring semester
description applies from the academic year (year):		2019/2020	Catalog number : ROL-ER-1S-03Z-08

Coordinator of the course[5]	Dr hab. Renata Kazimierczak
Teachers :	Teachers from a Chair of Organic Food
Conducting unit:	Department of Functional Foods, Ecological Foods and Commodities
Unit ordering classes :	
Goals and description of the course:	**Goal:** The aim of the course is to provide knowledge and to shape skills in the following areas: characteristics of basic groups of food raw materials of plant and animal origin. Students will learn about the commodity characteristics of organic vegetables, fruits, root crops and cereals as well as meat, milk and eggs. During the exercises students will evaluate selected raw materials in terms of their usefulness for direct consumption, processing and storage. **Description**: Lectures: Bioactive compounds present in raw food materials and their properties. Commodity characteristics of basic groups of raw food materials of plant origin: vegetables, fruit, root crops and cereals, including species used in organic production. Commodity characteristics of selected groups of raw food materials of animal origin: meat, milk and eggs, including species and breeds used in organic production. **Exercises:** Identification and commodity evaluation of selected raw food materials, taking into account the basic features, criteria and methods, indicating the nutritional value and suitability for direct consumption, processing and storage (potatoes, herbal spices, legumes, cereals, eggs). Analysis and assessment of the content of bioactive compounds in selected organic and conventional raw food materials and products (polyphenolic compounds in teas, anthocyanins in processed products, vitamin C in fruits and vegetables, chlorophylls in herbs and leaf vegetables). Evaluation of selected elements of sensory quality of milk and eggs from organic and conventional production. Critical analysis of scientific literature in the field of quality of raw food materials and products from conventional and organic production.
Didactic forms, number of hours :	W - lecture, hours 15 LC - laboratory exercises, hours 30
Teaching methods :	Lectures: Monographic lecture based on multimedia presentations. Classes: Practical laboratory exercises, analysis of the problem, students' presentations
Formal requirements and initial assumptions :	None

Learning outcomes :	Kowledge: W1 - student knows the properties of organic raw materials, plant and animal products as well as the principles and methods of their safe use, including biological, chemical and physical threats to food safety	Skills: U1 – student can assess the nutritional value, including the content of bioactive compounds and use these knowledge in the production of organic food	Ccompetence : K1 – student is able to work individually and in a group, taking different roles and aiming to achieve the assumed goal

The verification way of learning outcomes :	Written test, reports on practical exercises, student presentations
Form of documentation achieved learning outcomes:	Test sheets signed by the students
Elements and weights with the impact on the final grade:	Knowledge test - 50%, Reports on practical exercises and student presentations - 50%
Place for course:	Didactic classroom, laboratory

Basic and complementary literature:

1. Salgueiro L., Martins A. P., Correia H. (2018), Raw materials: the importance of quality and safety. A review. Flavour Fragr. J. 25, 253–271
2. Barański, M., Średnicka-Tober, D., Volakakis, N. et al. (2014), Higher antioxidant and lower cadmium concentrations and lower incidence of pesticide residues in organically grown crops: a systematic literature review and meta-analyses, British Journal of Nutrition, 112, 794–811.
3. Średnicka-Tober D., Barański M., Seal C.J., Sanderson R., et al. (2016), Higher PUFA and n-3 PUFA, conjugated linoleic acid, α-tocopherol and iron, but

lower iodine and selenium concentrations in organic milk: a systematic literature review and meta- and redundancy analyses. British Journal of Nutrition, 115: 1043–1060.
4. Średnicka-Tober D., Barański M., Seal C. et al. (2016), Composition differences between organic and conventional meat: a systematic literature review and meta-analysis. British Journal of Nutrition, 115: 994-1011.
5. Cooper J., Niggli U., Leifert C. (2007): Handbook of organic food safety and quality. CRC Press.
Hallmann E. (red.) (2014). Żywność ekologiczna – skrypt do ćwiczeń, wyd. SGGW.

Comments

Quantitative indicators characterizing the module / course:

Estimated total number of student work hours (contact and own work) necessary to achieve the expected learning outcomes – based on this, complete the ECTS field:	90 h
The total number of ECTS points that a student obtains in classes requiring direct participation of academic teachers or other persons conducting classes (consultations, cooperation with a supervisor):	1.5 ECTS

Table of compliance of the directional learning outcomes with the effects of the course:

effect category	Learning outcomes for the course:	Reference to effects for the study program for the field of study	The impact of the course on the field effect *)
Knowledge –W1	student knows the properties of organic raw materials, plant and animal products as well as the principles and methods of their safe use, including biological, chemical and physical threats to food safety	K_W13	3
Skills –U1	student can assess the nutritional value, including the content of bioactive compounds and use these knowledge in the production of organic food	K_U16	2
Competence –K1	student is able to work individually and in a group, taking different roles and aiming to achieve the assumed goal	K_S02	2

*)

3 - advanced and detailed,

2 - significant,

1 - basic,