Faculty : Human Nutrition and Consumer Sciences (WULS-SGGW)

Course title: Problem solving projects within organic sector

ECTS: 4 ECTS

Course form*:
Lectures: 5 hours
Practicals: 25 hours
Own work: 90 hours

Level: MSc, BSc

Prerequisite: food product designing, organic food, sensory analysis

Semester: SS

Lecturer(s): prof. Ewa Rembiałkowska, dr inż. Dominika Średnicka-Tober

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Description: The aim of the subject is to learn about the practical problems existing in the organic farming and food production and to learn how to prepare the solutions for the selected problems in practice.

The students should understand the principles and functioning of the organic sector in their country before they start to discover the solution for the selected problems.

The program develops ability of the students to cooperate with the stakeholders, to conduct the real projects in the organic food industry and related institutions active on a national and international scale.

In order to prepare students towards this field, the program provides them with the skills necessary to plan, conduct, record and evaluate complex projects, especially in the field of organic product quality, product development and innovation. Students are also trained in the group and interdisciplinary work focusing on the problem solving projects. Students also learn how to conduct scientific research in food and consumer sciences. Moreover, the students achieve the skills of independence, responsibility and vanquishing the obstacles.

Learning outcomes (knowledge and skill of the students after course):

- **Legal frame and functioning of the organic production and processing sector in Poland and European Union**
- **Factors influencing the produce quality**
- **Sensory evaluation of the organic foods**
- **Developing the innovative and nutritive organic food products**
- **Cooperation with the stakeholders**
- **Successful work in the group, independence, responsibility and overcoming the barriers.**

Assessment:

Presentation of the innovative product by the group of students including the sensory evaluation.

Literature:

1. Barański, M., Średnicka-Tober, D., Volakakis, N., Seal, Ch., Sanderson, R., Stewart, G.B., Benbrook, Ch., Biavati, B., Markellou, E., Giotis, Ch., Gromadzka-Ostrowska, J., Rembiałkowska, E., Skwarło-Sońta, K., Tahvonen, R., Janovska, D., Niggli, U., Nicot, Ph., Leifert, C. 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

2. Baryłko-Pikielna N., Matuszewska I. 2009: Sensoryczne Badania Żywności. Podstawy – Metody – Zastosowania, Wyd. Naukowe PTTŻ, Kraków.

3. Earle M., Earle R., Anderson, A. 2007. Opracowywanie produktów spożywczych – podejście marketingowe. WNT, Warszawa.

4. Fuller G.W. 2004. New Food Product Development: From Concept to Marketplace, Ed. 2, , CRC Press.

5. Kostyra E., Baryłko-Pikielna N. 2010: Towaroznawstwo żywności przetworzonej. [w:] Świderski F. i Waszkiewicz-Robak B. (red.): Analiza sensoryczna w towaroznawczej ocenie żywności, rozdział 4, s. 55-84.

6. Lawless H.T., Hildegarde Heymann H. 2010: Sensory Evaluation of Food: Principles and Practices. Springer Science & Business Media

7. Matt, D.; Rembialkowska, E.; Luik, A.; Peetsmann, E. and Pehme, S. (editor): Williams, Ingrid Helvi (Ed.) 2011: Quality of Organic vs. Conventional Food and Effects on Health. Estonian University of Life Sciences, Tartu, Estonia. ISBN 978-9949-484-06-5 (pdf)

8. Rutkowski I. 2007. Rozwój nowego produktu. Metody i uwarunkowania. PWE, Warszawa.

9. Średnicka-Tober D., Barański M., Seal C.J., Sanderson R., Benbrook C., Steinshamn H., Gromadzka-Ostrowska J., Rembiałkowska E., Skwarło-Sońta K., Eyre M., Cozzi G., Larsen N. K., Jordon T., Niggli U., Sakowski T., Calder P., C., Graham C. G. C., Sotiraki S., Stefanakis A.,Stergiadis S., Yolcu H.,16, Chatzidimitriou E., Butler G., Stewart G., Leifert C. 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, doi:10.1017/S0007114516000349

10. Średnicka-Tober D., Barański M., Seal C.J., Sanderson R., Benbrook C., Steinshamn H., Gromadzka-Ostrowska J., Rembiałkowska E., Skwarło-Sońta K., Eyre M., Cozzi G., Larsen N. K., Jordon T., Niggli U., Sakowski T., Calder P., C., Graham C. G. C., Sotiraki S., Stefanakis A., Yolcu H., Stergiadis S., Chatzidimitriou E., Butler G., Stewart G.,

Leifert C. 2016. Composition differences between organic and conventional meat: a systematic literature review and meta-analysis. British Journal of Nutrition, doi:10.1017/S0007114515005073

11. Trott P. 2005: Innovation Management and New Product Development. Financial Times Prentice Hall, Harlow.

The subject has been conducted in our University in January - June 2016 within EPOS project by the group of 20 students.

The syllabus has been prepared and presented at the meeting of the Didactic Committee of our Faculty in June 2016. However, there is an obstacle to introduce this new subject into the regular teaching program at our Faculty. The reason is that the program of our studies at the study track “human nutrition and food evaluation’ is already very full. There is only a possibility to propose this subject to the students as an elective module.

Therefore there is a plan to propose it as an elective module for the next academic year 2017/18.