Course title:	Food systems management
Course title in Polish:	Zarządzanie systemami żywnościowymi
Course for discipline:	Food technology and nutrition

Semester:	5	**Status of course:**	faculty	**Language:**	english
Academic year:		**Catalog number:**			

Coordinator of course:	dr hab. Krystyna Rejman, prof. SGGW/Associate Professor
Lecturer od course:	dr hab. Krystyna Rejman, prof. SGGW/Associate Professor, dr inż. Ewa Halicka
Executing unit:	Institute of Human Nutrition Sciences
Ordering unit:	Doctoral School SGGW
Assumptions, goals and description of the course:	The aim is to provide students with an understanding of the management of contemporary food systems and to raise awareness of the need to transform systems to sustainable ones in order to meet global climate, environmental and health challenges and to realise their potential to ensure the availability of sustainable diets for present and future generations. Exercise topics: Systems thinking and key challenges of food systems management Management of land, water and food resources in food systems in the context of global food security Environmental consequences of the operation of contemporary food systems Life cycle management in food systems - use of LCA (Life Cycle Assessment) methodology Management of staple food resources of plant and animal origin on a global and regional scale Concept, principles and benefits of a sustainable food consumption model and consumption patterns (diets) that meet the model's assumptions Waste management in food systems to reduce food loss and waste Cultural determinants of food systems transformation
Didactic form, number of hours:	Seminar exercises, 10 hours.
Teaching methods:	Analysis of the reference material, didactic discussion, multimedia presentations
Limit of people in the group:	???

Learning outcomes

KNOWLEDGE - the graduate knows and understands:	**SKILLS - the graduate is able to:**	**COMPETENCES - the graduate is ready to:**
To the extent enabling to revise the existing pradigms in the field/discipline - the world achievments, gathering theoretical background as well as general and selected detailed issues	Carry out critical assessment of the scientific research findings and expert activities and their contribution to the knowledge development in the field/discipline	Critically evaluate the achievments in the field/discipline represented
Major general development trends in the field/discipline		Recognise knowledge in solving cognitive and practical problems characteristic for the area of research (field/discipline) and in an interdisciplinary aspect
		Support the ethos of scientific circles and conduct independent research

The method of verification of learning outcomes:	Preparation and presentation (as a multimedia presentation) of a short report on a selected food system management issue as a basis for discussion during exercises, completion of a credit project.
Form of documentation of achieved learning outcomes:	Electronic storage of reports and credit projects Evaluation protocol
Elements and weights of the final grade:	70% project evaluation, 30% scientific report evaluation
Place of the course:	Teaching room

Basic and supplementary literature

1. UNEP IRP (2016). Food Systems and Natural Resources. A Report of the Working Group on Food Systems of the International Resource Panel. Westhoek, H., Ingram, J., Van Berkum, S., Özay, L., and Hajer, M. (lead authors). United Nations Environment Programme.
2. The Lancet Commissions (2019). Food in the Anthropocene: the EAT–Lancet Commission on healthy diets from sustainable food systems. The Lancet, 393, 447-492.
3. Campbell, B.M., Beare, D.J., Bennett, E.M. et al. (2017). Agriculture production as a major driver of the Earth system exceeding planetary boundaries. Ecology and Society 22(4):8. https://doi.org/10.5751/ES-09595-220408.
4. Heinrich-Böll-Stiftung, Friends of the Earth Europe, BUND (2021). Meat Atlas 2021. Facts and figures about the animals we eat. Wersja polska (2022).
5. Romanello, M., Napoli, C.D., Green, C et al. (2023). The 2023 report of the Lancet Countdown on health and climate change: the imperative for a health-centred response in a world facing irreversible harms. Lancet. 2023;402(10419):2346-2394. doi: 10.1016/S0140-6736(23)01859-7.
6. Foundation Earth (2023). LCA Methodology for Environmental Food Labelling - Beta Version 1.0. Foundation Earth, Belfast (dostęp: https://www.foundation-earth.org/resources/)

Literatura uzupełniająca:

1. Rejman, K., Halicka, E., Kaczorowska, J. (2023). Dieta planetarna – istota oraz znaczenie dla środowiska i ludzkości. (w) Gutkowska, K., Czarniecka-Skubina, E., Hamułka, J. (red.) Junior-Edu-Żywienie – wybrane zagadnienia edukacji żywieniowej. Wydawnictwo SGGW, Warszawa, s.139-149.
2. Ganczewski, G., Rejman, K., Górska-Warsewicz, H. (2021). Środowiskowe aspekty zarządzania cyklem życia w sektorze rolno-żywnościowym. (w:) Pizło W. (red.) Współczesne obszary zarządzania. Wydawnictwo SGGW, Warszawa 2021, s.1-10.
3. Halicka, E. (2021). Zrównoważona konsumpcja. Implikacje dla systemów żywnościowych. (w:) Pizło W. (red.) Współczesne obszary zarządzania. Wydawnictwo SGGW, Warszawa 2021, s. 85-95.
4. Rockström, J., Steffen, W., Noone, K. et al. A safe operating space for humanity. Nature 461, 472–475 (2009). https://doi.org/10.1038/461472a.

Bieżące artykuły i opracowania naukowe dotyczące transformacji systemów żywnościowych.

Comments:	

Estimated number of hours of work of the doctoral student necessary to achieve the assumed learning outcomes:	45

Leraning outcomes reference to the second degree characteristics of the National Qualification Framework (level 8) covering doctoral competences:		
Symbol:	**Learning outcomes:**	**8 level NQF**
SD1_KW01	To the extent enabling to revise the existing pradigms in the field/discipline - the world achievments, gathering theoretical background as well as general and selected detailed issues	P8S_WG
SD1_KW02	Major general development trends in the field/discipline	P8S_WG
SD1_KU05	Carry out critical assessment of the scientific research findings and expert activities and their contribution to the knowledge development in the field/discipline	P8S_UW
SD1_KK01	Critically evaluate the achievments in the field/discipline represented	P8S_KK
SD1_KK03	Recognise knowledge in solving cognitive and practical problems characteristic for the area of research (field/discipline) and in an interdisciplinary aspect	P8S_KK
SD1_KK08	Support the ethos of scientific circles and conduct independent research	P8S_KR