Course title:	Mites of the modern world - benefits and threats to human and animals
Course title in Polish:	Roztocze we współczesny świecie - korzyści i zagrożenia dla człowieka i zwierząt
Course for discipline:	Agriculture and horticulture

Semester:	6	**Status of course:**	faculty	**Language:**	english
Academic year:	2027/2028	**Catalog number:**	48/2025/26		

Coordinator of course:	dr hab. Katarzyna Michalska, prof. SGGW
Lecturer od course:	dr hab. Katarzyna Michalska, prof. SGGW
Executing unit:	Institute of Horticultural Sciences
Ordering unit:	Doctoral School SGGW
Assumptions, goals and description of the course:	This course is to familiarize students with the role of mites in the modern world, with particular emphasis on their environmental, health, and economic importance in various climatic zones and socioeconomic conditions. The aim will be to highlight both the positive aspects of mite occurrence—their role in various ecosystems, pest regulation, participation in food chains, and importance in agriculture and biological pest control—as well as the threats to crops, human and animal health, including tick-borne diseases, on a global scale. The lectures will cover the following topics: (1) Biology of mites, their presence in various ecosystems and geographical distribution, (2) Mites as bioindicators of environmental pollution, (3) Harmfulness of mites in crops and food storage, allergological risk and disease transmission by domestic, subtropical and tropical mites, (4) Application of selected mite species in biological pest control worldwide, (5) Impact of climate change and globalization on the occurrence of mites, including expansion of species transmitting pathogens, as well as monitoring and control strategies within the One Health framework.
Didactic form, number of hours:	15 hours
Teaching methods:	multimedia presentation, problem-solving lecture, discussion
Limit of people in the group:	18

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:	written exam + multimedia presentation
Form of documentation of achieved learning outcomes:	attendance list with grades from the written test and presentation, electronic files
Elements and weights of the final grade:	60% written exam, 40% presentation
Place of the course:	lecture hall

Basic and supplementary literature

Basic Literature:
(1) Walter DE, Proctor, HC., Mites: Ecology, Evolution & Behaviour, Springer, 2013
(2) Evans, G.O., Principles of Acarology, CABI, 1992.
(3) Diaz JH, Mite-Human interaction, Academic Press, 2023
Supplementary literature
(1) Krantz GW, Walter DE.,A Manual of Acarology. Texas Tech University Press, 2009
(2) Sonenshine, D.E., Biology of Ticks, Oxford University Press, 2018

Comments:	

Estimated number of hours of work of the doctoral student necessary to achieve the assumed learning outcomes:	25h

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