SZKOŁA GŁÓWNA GOSPODARSTWA WIEJSKIEGO

Agricultural Acarology

Educational subject description sheet

Basic information

Field of study Course Offer for exchange students - second cycle studies, including uniform master studies (MA programmes) **Speciality** - **Organizational unit** Course Offer for exchange students **Study level** second cycle studies, including uniform master studies (MA programmes) **Study form** full-time studies **Education profile** General academic	**Didactic cycle** 2024/25 **Subject code** PWMPWM2S_D.B100000P.06375.24 **Lecture languages** english **Mandatory** Elective subjects **Block** Basic subjects **Disciplines**

Coordinator	Mariusz Lewandowski
Teacher	Mariusz Lewandowski

Period	**Examination**	**Number of ECTS points**
Winter semester	Exam **Activities and hours** Lecture: 10 Laboratory exercises: 18 Field exercises: 2	3

Goals

Code	Goal
C1	Mites are the most diverse and successful among the invertebrates. They have exploited an incredible array of habitats. Many live freely in the soil or water, but a large number of species also live as parasites on plants, animals, and feed on mould. They can cause significant losses of the crop but also have a great influence on human and animal health. The course aims to supply students with general knowledge about mites and their influence on human life.

Subject's learning outcomes

Code	Outcomes in terms of	Effects	Examination methods
Knowledge – Student knows and understands:			
W1	knows and understands the biotic and abiotic factors influencing mites abundance		Written exam
W2	knows the biology of the most important mites taxon		Written exam
W3	know the major groups of mites important for environment and the human economy		Written exam
Skills – Student can:			
U1	can recognize economically important species of beneficial and pest mites		Report
U2	can collect and preserve mites from different microhabitats		Report, Assessment of activity during classes
Social competences – Student is ready to:			
K1	is ready to identify the main groups of beneficial and harmful mites plan the protection of crops against mites pests		Written exam

Study content

No.	Course content	Subject's learning outcomes	Activities
1.	Classification of mites taxon: the relationship of mites to other arthropods; morphology, ecology and biology of selected groups of mites (with consideration of taxonomic features); methodology of the acarological studies; mites as pests of agricultural and ornamental plants; phytoseiids as biological control agents: classical, augmentative, and conservation methods in biological control; post-harvest mite pests in agriculture; parasites of livestock and human.	W1, W2, W3, K1	Lecture
2.	External anatomy of mites belonging to the most economically important taxa and their identification (e.g. tics, spider mites, phytoseiid mites, eriophyoid mites, human and animal parasites), methods of mites collection, preparation, laboratory rearing.	U1, U2, K1	Laboratory exercises
3.	mites collection in a field	U2	Field exercises

Course advanced

Activities	Methods of conducting classes
Lecture	Lecture, Presentation
Laboratory exercises	Laboratory (experiment), learning by experiment, Observation
Field exercises	Field observations

Activities	Examination method	Percentage
Lecture	Written exam	60%
Laboratory exercises	Report	30%
Field exercises	Assessment of activity during classes	10%

Activities	Credit conditions
Lecture	51% from exam
Laboratory exercises	report from experiment
Field exercises	presence on field trip

Literature

Obligatory

1. Evans G.O. 1992. Principles of Acarology. Wallingford, Oxon
2. Krantz G.W., Walter D.E. 2009. A manual of Acarology. Texas University Press, Lubock.
3. Helle W., Sabelis M.W. 1985. Spider mites: Their biology, natural enemies and control (World Crop Pests, vols 1A and 1B). Elsevier Science Publishers, Amsterdam, Netherlands

Optional

1. Lindquist EE, Sabelis MW, Bruin J. 1996. Eriophyoid mites: Their biology, natural enemies and control. World Crop Pests (vol. 6). Elsevier Science Publishers, Amsterdam, Netherlands

Calculation of ECTS points

Activity form	Activity hours*
Lecture	10
Laboratory exercises	18
Field exercises	2
Preparation for exercises	15
Preparing a report	15
Preparation for the exam	20

Student workload	**Hours** 80
Number of ECTS points	**ECTS** 3

* hour means 45 minutes