KAPITAŁ LUDZKI
NARODOWA STRATEGIA SPÓJNOŚCI
Projekt współfinansowany przez Unię Europejską w ramach Europejskiego Funduszu Społecznego
UNIA EUROPEJSKA
EUROPEJSKI FUNDUSZ SPOŁECZNY

Course title	ECTS code
An outline of the invertebrates zoology	13.1.1453

Name of unit administrating study

Faculty of Biology

Studies

faculty	field of study		
Faculty of Biology	Medical Biology	type	first tier studies (BA)
		form	full-time
		specialty	all
		specialization	all
Faculty of Biology	Biology	type	first tier studies (BA)
		form	full-time
		specialty	all
		specialization	all
Faculty of Biology	Genetics and Experimental Biology	type	first tier studies (BA)
		form	full-time
		specialty	all
		specialization	all
Faculty of Biology	Natural Resources Conservation	type	first tier studies (BA)
		form	full-time
		specialty	all
		specialization	all

Teaching staff

dr hab. Jacek Szwedo; dr hab. Wojciech Pokora, profesor uczelni

Forms of classes, the realization and number of hours

Forms of classes

Lecture

The realization of activities

classroom instruction, online classes

Number of hours

Lecture: 15 hours

ECTS credits

2
Work in contact with the teacher:
participation in lectures - 15 hours
consultations with the lecturerm- 9 hours
exam - 2 hours
The individual student work:
preparation for the exam - 20 hours
studying the literature and materials for classes - 4 hours

The academic cycle

2022/2023 winter semester

Type of course

an elective course

Language of instruction

english

Teaching methods

Lecture with multimedia presentations

Form and method of assessment and basic criteria for eveluation or examination requirements

Final evaluation

Examination

Assessment methods

Written exam/test

The basic criteria for evaluation

the written exam is assessed according to the percentage rate ('UG Study Regulations')

Method of verifying required learning outcomes

Required courses and introductory requirements

A. Formal requirements

none

B. Prerequisites

none

Aims of education

1. Review of the most important phyla of the invertebrates.
2. Understanding the main mechanisms and trends in the evolution of these animals.
3. Ability to recognize basic phyla and classes of known animals.

Course contents

The role and tasks of systematics. Principles of contemporary zoological nomenclature. Basics of phenetics, cladistics and evolutionary systematics. Phylogeny, taxonomy, morphology, anatomy, bionomy and the economic importance of invertebrates of all phyla. Fossil record and evolutionary changes in invertebrates.

Bibliography of literature

A. Literature required for the final course credit (exam):

A.1. used during the class

1. Brusca R.C., Moore W., Shuster S.M. 2016. Invertebrates. 3rd Edition. Sinauer Associates Inc. Publishers, Sunderland, MA
2. Giribet G., Edgecombe G.D. 2020. The invertebrate Tree of Life. Princeton University Press, Princeton, NJ.
3. Grimaldi D., Engel M.S. 2005. Evolution of insects. Cambridge University Press, Cambridge, UK
4. Moore J. 2012. An introduction to the invertebrates. 2nd edition. Cambridge University Press
5. Pechenik J.A. 2015. Biology of the invertebrates. 7th Edition. McGraw-Hill, New York

A.2. studiowana samodzielnie przez studenta

1. Beutel, R.G., Friedrich F., Ge S.-Q., Yang X.-K. 2014. Insect morphology and phylogeny. A textbook for students of entomology. Walter de Gruyter GmbH, Berlin-Boston
2. Brusca R.C., Moore W., Shuster S.M. 2016. Invertebrates. 3rd Edition. Sinauer Associates Inc. Publishers, Sunderland, MA
3. Giribet G., Edgecombe G.D. 2020. The invertebrate Tree of Life. Princeton University Press, Princeton, NJ.
4. Grimaldi D., Engel M.S. 2005. Evolution of insects. Cambridge University Press, Cambridge, UK
5. Moore J. 2012. An introduction to the invertebrates. 2nd edition. Cambridge University Press
6. Pechenik J.A. 2015. Biology of the invertebrates. 7th Edition. McGraw-Hill, New York.

B. Supplementary literature

1. Benton M.J., Harper D.A.T. 2020. Introduction to paleobiology and the fossil record. 2nd edition. Wiley-Blackwell,
2. Dunlop J.A., Penney D. 2012. Fossil arachnids. Siri Scientific Press, Manchester
3. Minelli A., Boxshall G., Fusco G. (Eds.) 2013. Arthropod biology and evolution. Molecules, development, morphology. Springer-Verlag, Berlin-Heidelberg
4. Ponder W., Lindberg D.R., Ponder J.M. 2019. Biology and evolution of the Mollusca, Vol. 1. CRC Press, Boca Raton-London-New York
5. Ponder W., Lindberg D.R., Ponder J.M. 2020. Biology and evolution of the Mollusca, Vol. 2. CRC Press, Boca Raton-London-New York
6. Rasnitsyn A.P., Quicke D.L.J. (Eds.) 2002. History of insects. Kluwer Academic Publishers, Dordrecht
7. Schmidt-Rhaesa, A. (Ed.) 2013. Nematoda. Handbook of Zoology. De Gruyter, Berlin, Boston
8. Wallace R.L., Taylor W.K. 2003. Invertebrate zoology lab manual. 6th Edition. Pearson, North York, ON
9. Wanniger A. (Ed) 2015. Evolutionary developmental biology of invertebrates, Vols. 1-6. Springer-Verlag, Wien
10. Watling L., Thiel M. (Eds) 2013. The Natural History of the Crustacea. Vol. 1. Functional Morphology and Diversity. Oxford University Press, Ocford, UK

The learning outcomes (for the field of study and specialization)

Knowledge

1. Presentation of the structure of individual phyla and classes of invertebrates, taking into account functional relationships at the tissue, organ and organismal levels
2. Presentation of the characteristics, systematics and evolutionary traits of selected groups of invertebrates

Skills

1. combines data from various sources and on this basis draws adequate conclusions;
2. reads and understands scientific biological texts in English
3. independently searches for and uses available sources of biological information, including electronic resources
4. can use technical biological terms in English in a way that is comprehensible and accessible for specialists, as well as people outside the group of specialists
5. has the ability to present their own ideas and uses adequate argumentation in the context of selected theoretical and practical perspectives

Social competence

1. knows the limits of their own knowledge and understands the need for constant

	learning and development, and is open to new ideas 2. makes a critical self-assessment of their own competences, as well as updates their knowledge and improves skills 3. understands the need for honesty and reliability in the scientific and professional work

Contact

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