KAPITAŁ LUDZKI
NARODOWA STRATEGIA SPÓJNOŚCI

Projekt współfinansowany przez Unię Europejską w ramach Europejskiego Funduszu Społecznego

UNIA EUROPEJSKA
EUROPEJSKI FUNDUSZ SPOŁECZNY

Course title	ECTS code
Microscopy in biological sciences	13.1.1458

Name of unit administrating study

Faculty of Biology

Studies

faculty	field of study		
Intercollegiate Faculty of Biotechnology UG-MUG	Biotechnology	type	first tier studies (BA), second tier studies (MA)
		form	full-time
		specialty	all
		specialization	all
Faculty of Biology	Biology	type	first tier studies (BA), second tier studies (MA)
		form	full-time
		specialty	all
		specialization	all
Faculty of Chemistry	Chemistry	type	first tier studies (BA)
		form	full-time
		specialty	all
		specialization	all
Faculty of Chemistry	Environmental Protection	type	first tier studies (BA)
		form	full-time
		specialty	all
		specialization	all
Faculty of Economics	Economics	type	first tier studies (BA)
		form	full-time
		specialty	all
		specialization	all
Faculty of Oceanography and Geography	Geography	type	first tier studies (BA)
		form	full-time
		specialty	all
		specialization	all
Faculty of Oceanography and Geography	Oceanography	type	first tier studies (BA)
		form	full-time
		specialty	all
		specialization	all

Teaching staff

dr hab. Magdalena Narajczyk, profesor uczelni

Forms of classes, the realization and number of hours

Forms of classes

Wykład (to translate)

The realization of activities

blended learning, lectures in the classroom

Number of hours

Wykład (to translate): 15 hours

ECTS credits

2

Estimating working time
Working in contact with the teacher:
Lecture – 15h
Exam - 2 h
Consultation - 8 h

Independent work of the student
Preparation of the exam – 15 h

Totality – 40 h

2021/2022 winter semester

Type of course

elective (to translate)

Language of instruction

english

Teaching methods

Lecture with multimedia presentation

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

Final evaluation

Egzamin (to translate)

Assessment methods

Written exam: multiple choice and open questions

The basic criteria for evaluation

Mandatory attendance
The exam will cover study material presented in the course of the lectures.
Assessment criteria or examination requirements:
Obtaining 50%+1 points on the exam, i.e. giving correct answers to more than half of the questions;

Sposób weryfikacji założonych efektów kształcenia (DO TŁUMACZENIA)

examination sheet

Required courses and introductory requirements

A. Formal requirements

none

B. Prerequisites

none

Aims of education

1. Introduction students with modern imaging techniques used in biological sciences.
2. Understanding and the ability to use an appropriate microscopic techniques in research.
3. Ability to interpret the obtained microscopic images.

Course contents

Overview of microscopy used in the study of biological material - from light microscopy to electron microscopy. Methods using microscopy.
Preparation of material used for analyzes.
Application of microscopy in the diagnosis of civilization and genetic diseases. Analysis of the obtained results.

Bibliography of literature

A. Literatura wymagana do ostatecznego zaliczenia zajęć (zdania egzaminu):

1. J.J. Bozzola, L.D. Russell Electron microscopy (Principles and Techniques for biologists) 1992 Jones and Barlet Publishers, Boston

2. M. Pavelka, J. Roth Functional Ultrastructure (Atlas of Tissue Biology and Pathology) 2010 Springer-Verlag, Wien

Knowledge

- consistently applies and disseminates the principle of a strict, based on empirical data, interpretation of biological phenomena and processes in research and practical activities
- recognizes research problems from the border of biological sciences that require the use of advanced science tools
- recognizes the wealth of contemporary approaches and experimental techniques in biological sciences and properly plans to use them to solve given tasks

Skills

- plans and performs research tasks or scientific assessment in the field of studied biological specialty, under supervision of a supervisor

Social competence

- understands the need to use recognized sources of scientific and popular science information in the field of biological sciences in order to deepen knowledge

Contact

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