


KAPITAŁ LUDZKI
 NARODOWA STRATEGIA SPÓJNOŚCI

 Projekt współfinansowany przez
 Unię Europejską w ramach
 Europejskiego Funduszu
 Społecznego

UNIA EUROPEJSKA
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Course title		ECTS code	
Laboratory course		13.3.1187	
Name of unit administrating study			
null			
Studies			
faculty	field of study	type	drugiego stopnia
Wydział Chemii	Chemia	form	stacjonarne
		specjalty	chemia biomedyczna, analityka i diagnostyka chemiczna, chemia i technologia środowiska, chemia obliczeniowa
		specialization	wszystkie
Teaching staff			
<p>dr hab. Jolanta Kumirska, profesor uczelni; dr Grzegorz Olszewski; prof. dr hab. Piotr Stepnowski; dr Iwona Dąbkowska; dr hab. Grzegorz Romanowski; prof. UG, dr hab. Agnieszka Chylewska; prof. UG, dr hab. Monika Paszkiewicz; prof. dr hab. Sylwia Rodziewicz-Motowidło; dr hab. Paulina Czaplewska, profesor uczelni; dr Anna Wcisło; dr hab. Aleksandra Dąbrowska, profesor uczelni; dr hab. Dagmara Jacewicz, profesor uczelni; dr hab. Jarosław Ruczyński; dr hab. Piotr Mucha, profesor uczelni; dr hab. Elżbieta Jankowska, profesor uczelni; dr hab. Dagmara Strumińska-Parulska, profesor uczelni; dr hab. Dariusz Wyrzykowski; dr hab. Alicja Boryło, profesor uczelni; dr hab. Anna Białk-Bielińska, profesor uczelni; prof. dr hab. inż. Lech Chmurzyński; prof. dr hab. Adam Lesner; prof. dr hab. Mariusz Makowski; dr hab. Anna Łęgowska, profesor uczelni; dr Ewa Wiczerzak; prof. dr hab. Piotr Rekowski; dr Dorota Zarzeczkańska; dr hab. Magdalena Wysocka, profesor uczelni; dr Katarzyna Guzow; dr hab. Beata Grobelna, profesor uczelni; dr Paweł Niedziałkowski; prof. dr hab. Franciszek Kasprzykowski; dr hab. Artur Sikorski, profesor uczelni; dr hab. Janusz Madaj, profesor uczelni; dr hab. Marek Gołębiowski, profesor uczelni; prof. dr hab. Krzysztof Rolka; dr hab. Łukasz Haliński; dr Jaromir Kira; prof. dr hab. inż. Tadeusz Ossowski; dr hab. Zbigniew Kaczyński, profesor uczelni</p>			
Forms of classes, the realization and number of hours		ECTS credits	
Forms of classes		20	
Laboratory classes		classes 370 h	
The realization of activities		180 h in 3 semester	
classroom instruction		190 h in 4 semester	
Number of hours		Tutorial classes 60 h	
Laboratory classes: 370 hours		20 h in 3 semester	
		20 h in 4 semester	
		Student's own work 260 h	
		45 h in 3 semester	
		45 h in 4 semester	
		TOTAL: 500 h - 20 ECTS	
		245 h and 10 ECTS in 3 semester	
		255 h and 10 ECTS in 4 semester	
The academic cycle			
2023/2024 winter semester			
Type of course		Language of instruction	
obligatory		polish	
Teaching methods		Form and method of assessment and basic criteria for evaluation or examination requirements	
conducting experiments		Final evaluation	
		Graded credit	
		Assessment methods	
		Realization of master project and presentation of the obtained results	
		The basic criteria for evaluation	

an assessment of the quality of performed master's researches, including substantive preparation, independence in their realization, correctness of conducted researches (if performed), correctness of interpretation of the obtained results

Method of verifying required learning outcomes

Required courses and introductory requirements

A. Formal requirements

Organic chemistry, Biochemistry, Physical chemistry, Spectrochemistry, Instrumental analysis, Intellectual property protection, Advanced chemistry laboratory

B. Prerequisites

Knowledge of organic and physical chemistry and biochemistry at the first-cycle education, knowledge of the basic principles of occupational health and safety in a chemical laboratory, knowledge of the construction and operating principle of basic chemical apparatus used in the laboratory of organic synthesis and physicochemistry, knowledge of basic concepts and principles of property protection industrial and copyright law, the ability to synthesize simple organic compounds based on procedures written in Polish and English languages

Aims of education

- Planning and performance of experimental research project by each student working under the control /guidance of supervisor.
- Presentation of obtained research results in the form of written master thesis

Course contents

The program content is varied and depends on the scope of the topic of the master thesis

Bibliography of literature

A. Literature required to pass the course

A.1. Literature used during classes:

Specialist literature in the scope of realized master thesis. The scope of literature is corrected and still adopted to conducted master research topics

A.2. Literature for individual studies:

Specialist literature in the scope of realized master thesis. The scope of literature is corrected and still adopted to conducted master research topics

B. Extracurricular readings

Specialist literature in the scope of realized master thesis. The scope of literature is corrected and still adopted to conducted master research topics

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

Knowledge

Student:

- names and describes methods of synthesis and analysis and /or methods of computer theoretical calculations used during realization of master project
- distinguishes and characterizes individual experimental / IT techniques used during realization of research project
- identifies scientific and research apparatuses used during realization of research project and explains the principles of their operations

Skills

Student:

- performs scheduled experiments, makes observations
- analyzes the obtained results and compares them with available literature data
- draws conclusions from the conducted tests and proves their correctness in based on available literature data
- presents the same content in a different language convention
- systematically collects and prepares documentation of her/his research work

Social competence

Student:

- works independently
- correctly defines priorities necessary for realization of her/his own aims
- cares for safety during own-self realization of chemical experiments
- takes into account the made arrangements for realization of experiments

Contact

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