

COURSE UNIT DESCRIPTION - RESEARCH PRACTICE I+II

Course unit title	Code
RESEARCH PRACTICE I+II	

Lecturer(s)	Department(s)
Advisor (holding PhD) appointed by the Study Programme Committee	n/a

Cycle	Level of the course unit	Type of the course unit
Full-time studies (2 nd stage)	1-2	Compulsory

Mode of delivery	Period of delivery	Language of instruction
Consultations, seminars, research work	1 st semester, autumn (Research Practice I); 2 nd semester, spring (Research Practice I).	Lithuanian (English)

Prerequisites and corequisites	
Prerequisites: Molecular Biology, Biochemistry, Cell Biology	Corequisites (if any): None

Number of credits allocated to the course unit	Student's total workload	Contact hours	Self-study and research hours
8+12	214+332	24+34	190+286

Purpose of the course unit: programme competences to be developed		
<p><i>Subject specific competences:</i></p> <ul style="list-style-type: none"> • To deepen and broaden knowledge in molecular biology and related sciences; • To develop knowledge and understanding of modern methods and technologies, necessary for research; • To develop competencies for creative application of theoretical knowledge, methods and technologies in research and practical work; • To develop skills to work in interdisciplinary areas and integrate knowledge of different scientific fields; • To develop skills to identify and formulate ways of solution of the problem, to solve problems of unfamiliar character, collect, generalize and critically evaluate scientific information; • To develop skills to identify scientific and professional interests in the field of molecular biology and related fields; learning skills to study autonomously; <p><i>General competences:</i></p> <ul style="list-style-type: none"> • To develop skills to work in the research team; • To develop skills communicate concepts and knowledge of molecular biology to specialists and non- specialists; • To develop skills of personal effectiveness and responsibility for the decisions taken. 		
Learning outcomes of the course unit	Teaching and learning methods	Assessment methods
<p>Upon the successful completion of these research practices, students will acquire or further develop ability:</p> <ul style="list-style-type: none"> • Knowledge in molecular biology and related sciences, necessary for independent scientific research; • Knowledge of methods and technologies of molecular biology and related sciences and their application in research and practical work; • Ability to analyze, interpret, critically and systemically evaluate the research results present science-based conclusions;. • Ability to identify and solve molecular biology-related problems and their complexity in biotechnology, biomedicine, biopharmacy, environmental safety and other 	Individual research work in a laboratory; self-study.	Defence of research practice reports I -II

<p>areas;</p> <ul style="list-style-type: none"> • Ability to plan and conduct research in the field of molecular biology and related fields; • Ability to integrate the knowledge of different sciences, work in the interdisciplinary areas and use the knowledge of different scientific fields in solving problems of the research; • Ability to present research results, exchange ideas with scientific colleagues, including carrying out scientific research within a research group/team; • Readiness to study continuously and autonomously, ability to evaluate critically the novelties in the field of molecular biology and related sciences, ability to improve and update knowledge and skills and to seek new ones; • Ability to be responsible for the decisions taken. 		
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Content: breakdown of the topics	Contact hours						Self-study work: time and assignments	
	Lectures	Tutorials	Seminars	Exercises	Laboratory work Internship/work placement	Contact hours	Self-study hours	Assignments
Introductory lecture on the requirements for research practice and defence of the research practice reports.	1					1		
Research Practice I-II		24+34 = 78				24+34 = 78	190+ 286 = 476	Experimental or computer modelling research in the field of molecular biology; Participation in the laboratory every day life (seminars, scientific discussions, presentation of research practice reports in the laboratory); self-directed learning
Total	1	24+34				25+34	189+ 286	

Assessment strategy	Weight, %	Assessment period	Assessment criteria
Defense of Research Practice reports I-II	100 %	During the last week of the autumn and spring exam sessions, respectively	<p>Written research practice report must be submitted before the defence. The requirements for the preparation of research practice report are accessible at virtual learning environment http://vma.esec.vu.lt/</p> <p>Final mark is the average of marks (based on 1-10 scale) for oral presentation and answers to questions of members of defence committee, and for written report: 2-4 (insufficient) 5 (sufficient) 6 (satisfactory)</p>

			7(highly satisfactory) 8 (good) 9 (very good) 10 (excellent)
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Author	Year of publication	Title	Publishing place and house or web link
Main reading list			
Current research papers in the field of selected theme			
Janice R. Matthews and Robert W. Matthews.	2008	Successful Scientific Writing: A Step-by-Step Guide for the Biological and Medical Sciences, Third Edition	Cambridge University Press