COURSE DESCRIPTION (Group C)

Course code	Course group	Volume in ECTS credits	Course valid from	Course valid to	Reg. No.
APL5012	C	6	2016.10.18	2019.06.30	

Course type (compulsory or optional)	**Compulsory**
Course level (study cycle)	**I**
Semester the course is delivered	**Autumn**
Study form (face-to-face or distant)	**Face-to-face**

Course title in Lithuanian

APLINKOS TYRIMŲ METODOLOGIJA

Course title in English

ENVIRONMENTAL RESEARCH METHODOLOGY

Short course annotation in Lithuanian (up to 500 characters)

Kursas skirtas įgyti žinių ir įgūdžių savarankiškai atlikti mokslo tiriamąjį darbą. Studentai susipažins su bendrąja mokslo darbo rengimo metodika bei pagrindiniais principais, kuriais būtina vadovautis norint sėkmingai parengti savarankišką mokslo tiriamąjį darbą. Studentai įgis bendrą supratimą apie mokslinių tyrimų dizainą, metodiką ir techniką, formą ir pateikimą, duomenų valdymą ir analizę.

Short course annotation in English (up to 500 characters)

The course is designed to gain knowledge and skills to carry out independent research work. Students become familiar with the general scientific work the methodology and the basic principles which should be followed in order to successfully prepare independent research work. Students will gain an overview of research intent and design, methodology and technique, format and presentation, and data management and analysis informed by commonly used statistical methods.

Prerequisites for entering the course

Statistical methods

The course aim to provide an overview of the important concepts of research design, data collection, statistics and interpretative analysis, and final report presentation.

Links between study programme outcomes, course outcomes and criteria of learning achievement evaluation

Study programme outcomes	Course outcomes	Criteria of learning achievement evaluation
2. Assess the complex impact of environmental and climatic factors on wildlife and human health by means of formulating scientific hypotheses, research aims and objectives, and selecting efficient research methods.	1. To formulate research aim and objectives	Formulated research aim and objectives
	2. To formulate research question and hypothesis.	Formulated research question and hypothesis.
3. Formulate scientific conclusions based on systematised environmental research findings and comprehensive statistical analysis of parametric and spatial data.	3. To select study design, to programme study plan.	Selected study designed, programmed study plan.
	4. To select appropriate research data analysis method, to conduct statistical analysis, to formulate scientific conclusions	Selected appropriate research data analysis method, conducted statistical analysis, formulated scientific conclusions

Link between course outcomes and content

Course outcomes	Content (topics)
1. To formulate research aim and objectives	Introduction to research method. Research process.
	Research planning. The research problem, the aim and objectives
2. To formulate research question and hypothesis.	Hypotheses. Types of hypothesis, hypothesis formulation.
	Reviewing the Literature
3. To select study design, to programme study plan.	Research Types I. Field, experimental studies.
	Research Types II. Epidemiological studies.
	Selecting study design. Data collection methods.
	Research errors. Systematical and random errors.
	The survey and its concepts. Questionnaire, interview.

4. To select appropriate research data analysis method, to conduct statistical analysis, to formulate scientific conclusions	Statistical data analysis. Descriptive statistic, chi square, correlation.
	Sampling. Sample for finite populations.
	Sample size determination. Latin Square Designs
	Scale Reliability and Validity. Cronbach's alpha. The detection of main factors
	Writing a Research Report

Study (teaching and learning) methods

Teaching methods: telling, case disquisition, consulting, presentation of examples, answers to questions and discussions, laboratory works.
Learning methods: case analysis, disquisition and presentation, tasks and problem-solving, case analysis solution, discussion.

Methods of learning achievement assessment

Written survey

Distribution of workload for students (contact and independent work hours)

Lectures	30 val.
Laboratory work	30 val.
Individual students work	100 val.
Total:	160 val.

Structure of cumulative score and value of its constituent parts

Mid – term exam – 25 %, Practical classes – 25 %, Exam – 50%.

Recommended reference materials

No.	Publication year	Authors of publication and title	Publishing house	Number of copies in		
				University library		
Basic materials						
1.	2011	Ranjit Kumar. RESEARCH METHODOLOGY a step-by-step guide for beginners. http://www.sociology.kpi.ua/wp-content/uploads/2014/06/Ranjit_Kumar-Research_Methodology_A_Step-by-Step_G.pdf	SAGE Publications Inc.			
2.	2002	K. Kardelis. Mokslinių tyrimų metodologija ir metodai.	Judex	7		
3	2010	Sampling:Design and analysis http://www.math.zju.edu.cn/webpagenew/uploadfiles/attachfiles/2013351428476 31.pdf	CengageBrain.com			
Supplementary materials						
1.	2004	C.R. Kothari. Research methodology. Methods and techniques. http://www.suza.ac.tz/saris/download/132376585119680689-Research-MethodologyMethods-and-Techniques-by-CR-Kothari.pdf%202.pdf	New age international (p) limited, publishers			
2.						

Course programme designed by

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