<table>
<tr><td colspan="2">NAME OF THE COURSE</td><td colspan="5">Research Methodology</td></tr>
<tr><td>Code</td><td>PMB705</td><td>Year of study</td><td colspan="4">1.</td></tr>
<tr><td>Course teacher</td><td>Željana Fredotović, PhD, Assistant Professor</td><td>Credits (ECTS)</td><td colspan="4">4,0</td></tr>
<tr><td rowspan="2">Associate teachers</td><td rowspan="2"></td><td rowspan="2">Type of instruction (number of hours)</td><td>L</td><td>S</td><td>E</td><td>F</td></tr>
<tr><td>15</td><td>15</td><td>15</td><td></td></tr>
<tr><td>Status of the course</td><td>mandatory</td><td>Percentage of application of e-learning</td><td colspan="4">40%</td></tr>
<tr><td colspan="6">COURSE DESCRIPTION</td></tr>
<tr><td>Course objectives</td><td colspan="5">To introduce students with basic knowledge about different scientific research designs and methods. Students will learn to use online library reference sources and services, and learn how to set up a research study- from constructing the hypotheses to formulation of a research plan (methods and techniques), data analysis, writing the paper and finally presenting it.</td></tr>
<tr><td>Course enrolment requirements and entry competences required for the course</td><td colspan="5">None.</td></tr>
<tr><td>Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</td><td colspan="5">Students will:
• Understand different scientific research designs and methods
• Learn how to set up a research study
• Learn how to search online science databases and to use scientific literature
• Understand correct ways to refer to and cite from scientific literature
• Be able to analyse, compare and review scientific literature</td></tr>
<tr><td>Course content broken down in detail by weekly class schedule (syllabus)</td><td colspan="5">Lectures:
1) Introduction to research process: What is a research, different research approaches, importance of scientific research, scientific methods, research process, features of a good research design (2 hours)
2) Searching online science databases. Using the scientific literature and correct citing of scientific literature (3 hours)
3) Research plan: identifying a hypothesis or a research problem, creating a research question, reviewing literature, prepare research design (methods and experiments) (3 hours)
4) Sampling, measurements, experiments (2 hours)
5) Data collection and analysis (2 hours)
6) Interpretation of data, paper writing and presentation (3 hours)

Seminar:
1) Students must prepare a proposal for their own research project. The students should address a procedure for collecting, analysing and reporting the dana. Their research proposal should include a sample design, data collection methods, data description and, if required, statistical analysis technique employed. Each student must present his research proposal to other students and initiate discussion (15 hours)

Laboratory exercises:</td></tr>
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	1) Students will perform some of the experimental methods from their research proposal (15 hours)					
Format of instruction	☒ lectures ☒ seminars and workshops ☒ exercises ☐ *on line* in entirety ☒ partial e-learning ☐ field work		☒ independent assignments ☒ multimedia ☒ laboratory ☐ work with mentor ☐ (other)			
Student responsibilities	Students presence in the amount of at least 70% of scheduled lectures and laboratory exercises and preparation of seminar work on their own.					
Screening student work *(name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)*	Class attendance	0,5	Research		Practical training	
	Experimental work	0,5	Report		(Other)	
	Essay		Seminar essay	1,5	(Other)	
	Tests		Oral exam		(Other)	
	Written exam	1,5	Project		(Other)	
Grading and evaluating student work in class and at the final exam	Grading will be conducted based on the seminar work and its presentation, and the final written exam.					

	Title	**Number of copies in the library**	**Availability via other media**
Required literature (available in the library and via other media)	Quinn, G.P. 2002. Experimental design and data analysis for biologists. Cambridge University Press, Cambridge		
	Laake, P., Benestad, H., Olsen B. 2007. Research methodology in the medical and biological sciences. Academic Press		

Optional literature (at the time of submission of study programme proposal)	1. Marušić, M. Uvod u znanstveni rad u medicini. 2013. Medicinska naklada, Zagreb. 2. McMillan, V.E. Writing papers in the biological sciences. 1997. Bedford Books, Boston 3. Silobrčić, V. 2008. Kako sastaviti, objaviti i ocijeniti znanstveno djelo. Medicinska naklada, Zagreb
Quality assurance methods that ensure the acquisition of exit competences	Students questionnaire.
Other (as the proposer wishes to add)	