Faculty of Medicine / STOMATOLOGY / SCIENTIFIC RESEARCH METHODOLOGY

Course:	SCIENTIFIC RESEARCH METHODOLOGY			
Course ID	**Course status**	**Semester**	**ECTS credits**	**Lessons** (Lessons+Exercises+Laboratory)
7929	Mandatory	1	10	2+2+0
Programs	STOMATOLOGY			
Prerequisites	There is no conditioning			
Aims	Acquiring knowledge and skills in the field of scientific research methodology			
Learning outcomes	After completing the one-semester course and passing the exam in the subject of scientific research methodology, the student of doctoral studies should have the following learning outcomes: 1. Knows the general methodological principles of scientific research 2. Knows the types of scientific research and their basic characteristics. 3. Knows the ethical norms in biomedical research 4. Knows the basic elements of the application of evidence-based medicine 5. Knows the concepts of connection and causality, as well as the criteria for causality 6. Knows how to calculate indicators of morbidity and mortality 8. Knows how to describe the types of epidemiological studies and their advantages and disadvantages 9. Knows how to distinguish types of samples and their application 10. Knows different types of measurement errors - biases 11. Knows the principles of planning and reporting a scientific research project.			
Lecturer / Teaching assistant	prof. dr Dragan Laušević, prof. dr Boban Mugoša			
Methodology	Lectures, exercises, consultations, seminar papers, presentation in front of the group			
Plan and program of work				
Preparing week	Preparation and registration of the semester			
I week lectures	General methodology of scientific research in medicine			
I week exercises	They follow lectures through examples from domestic and foreign practice			
II week lectures	Classification of scientific research - types of research			
II week exercises	They follow lectures through examples from domestic and foreign practice			
III week lectures	Evidence-based medicine			
III week exercises	They follow lectures through examples from domestic and foreign practice			
IV week lectures	Important ethical norms in biological and medical research			
IV week exercises	They follow lectures through examples from domestic and foreign practice			
V week lectures	Concept of connection and causation			
V week exercises	They follow lectures through examples from domestic and foreign practice			
VI week lectures	Measures of frequency of health disorders			
VI week exercises	They follow lectures through examples from domestic and foreign practice			
VII week lectures	Standardization of morbidity and mortality indicators (direct and indirect)			
VII week exercises	They follow lectures through examples from domestic and foreign practice			
VIII week lectures	Sample (types and size of sample)			
VIII week exercises	They follow lectures through examples from domestic and foreign practice			
IX week lectures	Descriptive studie			
IX week exercises	They follow lectures through examples from domestic and foreign practice			
X week lectures	Basic characteristics of different types of observational analytical studies (cohort, case and control studies, cross-sectional studies			
X week exercises	They follow lectures through examples from domestic and foreign practice			
XI week lectures	Intervention (experimental) studies			
XI week exercises	They follow lectures through examples from domestic and foreign practice			
XII week lectures	Experiments on animals in laboratory conditions			
XII week exercises	They follow lectures through examples from domestic and foreign practice			

XIII week lectures	Variability and measurement errors (bias)
XIII week exercises	They follow lectures through examples from domestic and foreign practice
XIV week lectures	Screening
XIV week exercises	They follow lectures through examples from domestic and foreign practice
XV week lectures	Preparation and reporting of a scientific research project
XV week exercises	They follow lectures through examples from domestic and foreign practice
Student workload	In the semester Classes and final exam: (13.33 hours) x 16 = 213.28 hours Necessary preparations before the beginning of the semester (administration, registration, certification): (13.33 hours) x 2 = 26.66 hours Total workload for the course: 10 x 30 = 300 hours Load structure: 234.56 hours (teaching and final exam) + 29.32 hours (preparation) + 42 hours (additional work)

Per week	**Per semester**
10 credits x 40/30=13 hours and 20 minuts 2 sat(a) theoretical classes 0 sat(a) practical classes 2 excercises **9 hour(s) i 20 minuts** of independent work, including consultations	Classes and final exam: **13 hour(s) i 20 minuts x 16 =213 hour(s) i 20 minuts** Necessary preparation before the beginning of the semester (administration, registration, certification): **13 hour(s) i 20 minuts x 2 =26 hour(s) i 40 minuts** Total workload for the subject: **10 x 30=300 hour(s)** Additional work for exam preparation in the preparing exam period, including taking the remedial exam from 0 to 30 hours (remaining time from the first two items to the total load for the item) **60 hour(s) i 0 minuts** Workload structure: **213 hour(s) i 20 minuts (cources), 26 hour(s) i 40 minuts (preparation), 60 hour(s) i 0 minuts (additional work)**
Student obligations	Regular attendance of classes and exercises, preparation of a seminar paper
Consultations	
Literature	1. Metodologija naučnog saznanja I – Kako stvoriti naučno delo u biomedicini. Jovan Đ. Savić, drugo izdanje, 2013, DATASTATUS, Beograd 2. Oxford Handbook of Clinical and Healthcare Research. Editors: Sumantra Ray, Sue Fitzpatrick, Rajna Golubic, Suzan Fisher, Oxford University press, 2016 3. Internet sources
Examination methods	Up to 30 points - regular attendance (15) and activity in classes (15); up to 20 points - seminar paper; up to 50 points - an exam in the form of a test. A passing grade is obtained if a minimum of 50 points is accumulated
Special remarks	
Comment	

Grade:	F	E	D	C	B	A
Number of points	less than 50 points	greater than or equal to 50 points and less than 60 points	greater than or equal to 60 points and less than 70 points	greater than or equal to 70 points and less than 80 points	greater than or equal to 80 points and less than 90 points	greater than or equal to 90 points