

University of Niš Faculty of Medicine	Study program: INTEGRATED ACADEMIC STUDIES OF MEDICINE <i>ACCREDITATION 2018</i>	
Course: Research principles and ethics		
Course head: Prof. dr Tatjana Jevtović Stoimenov		
Course status:	Elective	
Semester: III	Study year: II	
ECTS: 4	Course code: M-II-9.v	
Course purpose:		
During the course, students will learn about: <ul style="list-style-type: none"> ▪ basic principles of medical ethics and assessment of ethical attitudes towards specific medical problems; ▪ introduction of students to the methodology of research work in biomedical sciences; ▪ knowledge of the principles of ethics in preclinical and clinical research; ▪ adopt moral and professional standards, and principles of ethical and professional behavior; ▪ acquisition of experience in the presentation of achieved research results in original research papers to scientific/academic community. 		
Course outcome: (knowledge, skills, attitudes)		
By the acquisition of knowledge in the field of experimental and clinical research students should be well prepared for the identification/definition of actual scientific problems, preparation of research plans, and reporting and presentation of obtained results, as well as to adopt and abide by the principles of intellectual honesty and research ethics in all phases of experimental and clinical research and creation of a scientific work.		
No. of classes of active teaching: 30		
Lectures: 15	Practice: 0	OFT: 15
Course contents		
<p><u>Theory</u></p> <p>Introduction to the research methodology in biomedical sciences. Classification and division of science. Issues of ethics in biomedical publications: intellectual (dis)honesty, errors in science: gray zone, cheating, role of Ethics Committees, significance of ombudsmans, ethical principles of using and keeping of lab animals.</p> <p>Informatics as a science; significance of primary, secondary, and tertiary publications. Use of scientific information in the planning and preparation of scientific research. E-medicine – use and significance in science. Biological assays <i>in vivo</i>: experiments with whole organs; with tissue homogenates; with subcellular organelles. Experimental models in hepatology. Experimental models in nephrology. Experimental research of the CNS.</p> <p>Techniques used to obtain tissue homogenates and subcellular particles (native nuclei, mitochondria, microsomal fractions, cytosol) using the methods of differential ultracentrifuging. Experimental models <i>in vitro</i> – tissue culture.</p> <p>Significance of histochemical, physiological, biochemical, pathophysiological research in medicine. Human genome project. Laboratory investigation of hereditary diseases. PCR technique and its clinical application.</p> <p>Clinical research and research in primary health care. Controlled clinical research and medical field-research. Processing of scientific results: analysis and synthesis of obtained results using statistical processing. Presentation of obtained results to the public. Original research paper and review research paper.</p> <p>Seminar topics are formulated at the beginning of classes from the contents of practical teaching.</p>		
Recommended literature:		
<ol style="list-style-type: none"> 1. Savić J. Kako napisati, objaviti i vrednovati naučno delo u biomedicini. Kultura, Beograd, 2001. 2. Gustavii B. How to write and illustrate a scientific paper. Cambridge University Press, 2003. 3. Gauch H. Scientific Method in Brief. Waterstone, USA, 2012. 4. Cucić V. Osnovi metodologije naučnog istraživanja u medicini. Nauka, Beograd, 1996 5. Topić E, Primorac D, Janković S. Medicinsko-biohemijska dijagnostika u kliničkoj praksi, Medicinska naklada –Zagreb, 2004. 		

6. Radačić M, Bašić I, Eljuga D. Pokusni modeli u biomedicini. Medicinska naklada, Zagreb, 2000.
7. Council of Science Editors. Scientific Style and Format: the CSE Manual for Authors, Editors, and Publishers, 7th edition, Cambridge University Press UK, 2006.
8. Radenković S: Bioetika i medicina, Akademska knjiga, Novi Sad, 2012.
9. Petrušić N, Simonović I. (Urednik D. Pavlović): Etičke i pravne dimenzije biomedicinskih istraživanja, Nais-Print, Niš, 2014.
Teaching methods:
<ul style="list-style-type: none"> ▪ Theory classes ▪ OFT - small group work, resolution of tasks
Required previously passed exams:
None
Grade (max. 100 points)
Pre-exam obligations
<ul style="list-style-type: none"> ▪ Activity at classes: 0 – 10 points ▪ Tests: 0 – 20 points
Final exam
<ul style="list-style-type: none"> ▪ Written exam: 0 – 70 points