

Study program / course: Mechanical engineering			
The type and level of study: Master academic studies			
Name of cases: Research work in the Mechanical Engineering			
Teacher (last name, middle letter, name): Slobodan Tanasijevic, Milun Babic, Slavko Arsovski, Miroslav Demic			
Status: Obligatory, joint for all modules, II semester			
Number ECTS: 6			
Condition: No conditions			
Aim Make students in scientific research access to the main research work and tasks that will be generations of intellectuals, where they belong, in the face during their working life. Engineers proper direction to the future and expectations of the world community of the need to help them avoid disorientation and to draw possible polygon professional effects.			
The outcome of the case After completing the course, students will be able to team and independently involved in solving problems related to scientific research and professional tasks that will be encounter during their professional mission.			
Content items Lectures: <i>Theoretical and practical teaching:</i> Introduction (logic - genesis and development, scientific explanation, prediction and understanding; structure of scientific knowledge - facts, laws and theories, scientific method - a modern understanding; Evaluation and comparison of scientific theory, theory and empirical testing hypothesis; methodology in the structure meta-science; Scientific research - nature, types, functions and structure; traditional and new research paradigm; problem investigation hypothesis research; types and the draft research; measurement in the study); General methodology of scientific research (ethics and code of ethics of scientific research; accelerometers information technology, information and their importance; the database critical assessment and use of information, assessment of the credibility of information obtained through the Internet and other electronic services; writing, publishing, presentation and evaluation of scientific work; ethics of publishing, authorship, co-authorship; Errors in scientific publications ; Evaluation of scientific work. Impact factor. Writing and application of scientific project; Intellectual property in the technical sciences; copyright and patent protection). World-wide scientific research challenges of the 21st century (Classification and cause-effect relationship. Relations of quality life, intensity of growth of living standards community and the degree of their inclusion in the main trends of development and implementation of the so-called. global research challenges. General notes about the so-called. global research challenges in the natural-mathematical, technical - technological and social sciences)			
<i>Training:</i> Exercises, other forms of teaching, Study Research			
References			
Number of active teaching			Other classes
Lectures: 2	Exercises: 2	Other forms of teaching: 0	Study Research: 0.5
Methods of teaching: Interactive classroom lectures and exercises, creating the so-called two editorial seminars and one final work.			0.5
Score of knowledge (the maximum number of points 100)			
Examination obligations	Points	Final exam	Points
Activity during lectures	10		
Practical teaching		Oral exam (presentation of final seminar work)	40
Tests:		
Seminars (two seminar's work)	50		