Course Unit Descriptor

Study Programme: Ph.D. in Computer Science	
Course Unit Title: Research Methods	
Course Unit Code: ID012	
Name of Lecturer(s): Zoran Budimac	
Type and Level of Studies: Doctoral Academic Degree	
Course Status (compulsory/elective): Compulsory	
Semester (winter/summer): Winter	
Language of instruction: Serbian (primary), English (secondary)	
Mode of course unit delivery (face-to-face/distance learning): Face-to-face	
Number of ECTS Allocated: 7	
Prerequisites: none	

Course Aims:

Presentation and development of concepts, organizational structure and deliverables of a research project, using quantitative and qualitative methods and their combinations. An attention is paid to the ways of adequate (written and oral) presentations of deliverables. It is also expected an understanding and appreciation of different ways of organization, planning and execution of technical research projects.

Learning Outcomes:

Successful student will be able to:

- Formulate plan and lead research project
- Choose and evaluate an appropriate research method
- Present adequately results of research project
- Demonstrate experience in processes and methods for structuring, collecting and processing data in technological environment.

Syllabus:

Theory
Studying and classification of research methods. Overview of fundamental skills and knowledge in: communication and presentation, literature review, technical reports… Analysis of problems and evaluation of performances. Applied statistical methods. Research project management.

Practice
Using software tools in application of chosen statistical methods

Required Reading:

1. CLELAND & KING Project management handbook 2nd edition, van Nostrand Reinhold.
2. LAMERS & ARNOLD, Report writing for science, technology and management, Wageningen Agricultural University, 1990.
3. MONTGOMERY DOUGLAS C, introduction to statistical quality control 2nd edition, John Wiley adn Sons.
4. STRAKER DAVID, A toolbook for quality improvement and problem solving, Prentice Hall, 1995
5. BHOTE KELIR, World class quality, American Management Association

Weekly Contact Hours: 4	**Lectures:** 2	**Practical work:** 2

Teaching Methods:
During lectures classical teaching methods using projector are used. Students individually woek on specific assignments, take part in thematic workshops, and discuss results with other students and lecturer.

Knowledge Assessment (maximum of 100 points):

Pre-exam obligations	Points 60	**Final exam**	Points 40
Active class		written exam	

participation			
Practical work		oral exam	
Preliminary exam(s)		…….	
Seminar(s)			
The methods of knowledge assessment may differ; the table presents only some of the options: written exam, oral exam, project presentation, seminars, etc.			