Course Unit Descriptor

**Study Programme: Information Systems Engineering Course Unit Title: Principles of Research Practice** Course Unit Code: IZMI12 Name of Lecturer(s): Mirković Milan, Vrgović Petar Type and Level of Studies: master Course Status (compulsory/elective): elective Semester (winter/ summer): winter Language of instruction: english Mode of course unit delivery (face-to-face/distance learning): face-to-face **Number of ECTS Allocated: 4** 

Prerequisites: none

#### Course Aims:.

The aim of this course is to introduce students to contemporary research methods and elements of the research process, as well as to provide them with knowledge necessary to independently engage in different research activities (such as defining research questions, experiment design, data gathering and analysis, drawing conclusions and results presentation).

### **Learning Outcomes:**

Upon completing this course, participants will be able to independently define meaningful research questions, design and conduct experiments, interpret and draw valid conclusions based on the obtained results, and finally, present findings of the research in a structured way to peers and scientific community.

#### Syllabus.

Topics covered within the course are: defining research questions, experimental design, research variables, methods of measurement, direct and indirect measurement, reliability, measurement errors, control groups, sampling, reaching conclusions, reporting the results and referencing sources. Students will also be introduced to contemporary tools that can aid them at various research stages: LaTEX, MS Word, Mendeley.

### **Required Reading:**

Relevant literature in English, tbd

**Weekly Contact Hours:2** Lectures: 2 Practical work: 0

## **Teaching Methods:**

Lectures and labs, an individual assignment and oral exam. Lectures will cover theoretical aspects of the course, while the study research work will focus on enabling the students to use LaTEX, MS Word and Mendeley to structure a scientific paper and appropriately cite sources used.

# **Knowledge Assessment (maximum of 100 points):**

Pre-exam obligations	points	Final exam	points
Attendance			
Computer exercises			
Tests (4x)			