

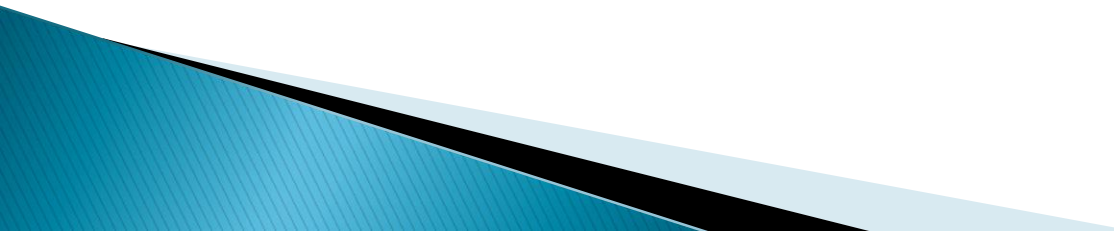


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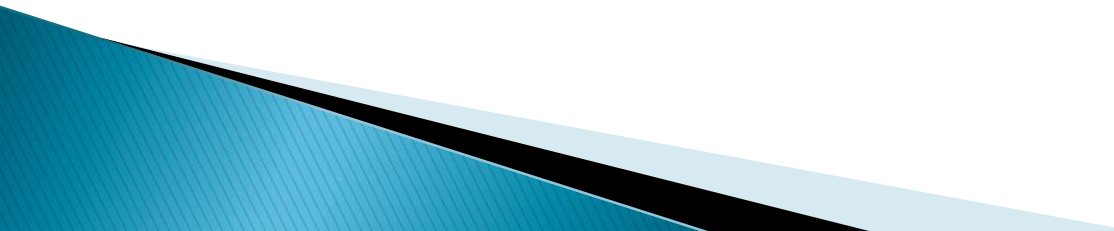
# MSc in Remote control

Technical faculty Čačak  
University of Kragujevac

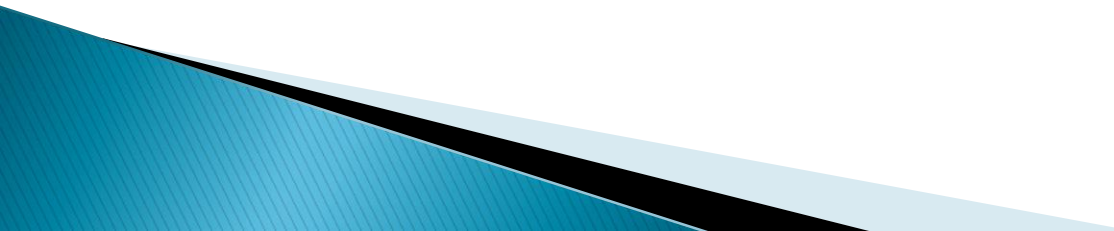
# Knowledge – theoretical and factual

- ▶ Highly specialized knowledge in field of remote control systems
  - ▶ Critical awareness of knowledge issues in a field related to remote control
  - ▶ Understanding of different remote control objects and systems
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# Skills – cognitive and practical

1. Critical awareness about achieved knowledge, referred to the labor market requirements with emphasis on innovation
  2. Ability to develop innovative and creative applications for effective remote control solutions
  3. Ability to accommodate cutting age technology
  4. Skill for knowledge resources usage
  5. Practical skills in building, designing and implementing remote control systems (smart sensing, data acquisitions and digital signal processing, network communications, designing user interfaces)
  6. Skills in making professional decisions
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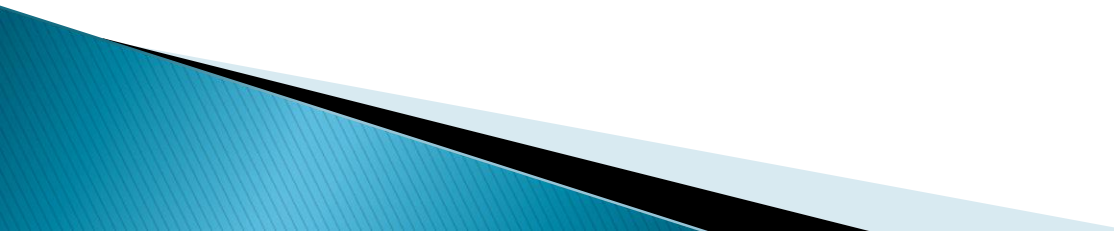
# Competences

1. Competences for collaborative and team working
  2. Competences for realization of different team roles
  3. Competences for research planning, data gathering, analysis and reporting
  4. Competences for presentation of team projects to different groups and management levels
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# MODULES

## Obligatory modules

### 1. Basics in Remote Control (Courses: Remote control, Intelligent sensors)

- skills in designing remote-control systems
  - skills in using modern control equipment and communication techniques
  - skills in building systems for data acquisition
  - ability to design, analyze and implement: signal conditioning circuits for sensors, data acquisition software for sensors and actuators, pattern analysis algorithms for multi-sensor systems
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# MODULES

## Obligatory modules

### **2. Signal transmission and estimation (Courses: Modern communication systems, Advanced signal processing)**

- cohesive insight into principles of modern communication systems
- being familiar with network technology as well as being able to build communication infrastructure
- knowledge of advanced signal processing techniques (spectral estimation and prediction, adaptive filtering) and their use in the present-day control systems
- using a combination of theory and software implementations to solve signal processing problems

# MODULES

## Obligatory modules

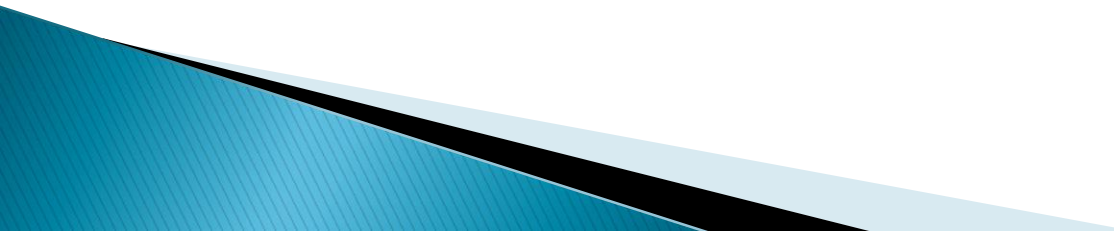
### **3 .Study research on master work theoretical base**

- use information systems effectively;
- propose and justify an appropriate research plan for a particular research problem;
- prepare a well written and concise research paper or report;
- develop and write a research proposal for their discipline area, and team research project;
- present and discuss research design and methodology in connection with master project;
- apply ethical demands in scientific and applicative individual and team investigations.

### **4. Practical work in the company**

### **5. Master thesis**

# Elective modules (choose two):

- ▶ Process monitoring (Human computer interactive, Monitoring and process visualisation)
  - ▶ Remote exercises (Simulation and process modelling, Virtual instrumentation)
  - ▶ Remote control applications (Control of electromotive drives, Heating systems)
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# Assessment methods and techniques

- continual class activities (class participation, class discussion...)
  - oral and/or written midterm and final exam
  - report of state of the art in remote control field
  - homeworks
  - seminars
  - laboratory work
  - individual or group applicative research project (creativity, presentation, team work, innovation, interdisciplinarity)
  - individual or group paper and presentation in class conferencing
  - proposal for project and master research
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