Study program: Modern computer technologies

Course title: Microcontrollers and Interfaces

Professor/assistant: Zoran Veličković / Milan Savić

Type of course: elective

ECTS credits: 6

Pre-requisites: none

Aims of the course:
Preparing students to:
- adopt basic concepts of microcontrollers and interfaces;
- learn about architecture, specificity of integrated peripherals and basic interfaces of microcontrollers for interaction with the environment;
- learn how to solve practical problems related to the interaction of microcontroller systems with sensors and actuators.

Learning outcomes:
It is expected that after passing the exam students can:
- describe the basic components for connection of sensors and actuators into microcontroller systems;
- use standard interfaces to interact with the environment;
- design specialized measuring microcontroller systems;
- analyze concrete solutions and offer suggestions for improvement.

Syllabus

Theoretical part:

Practical part:

Literature

Number of active classes

<table>
<thead>
<tr>
<th>Lectures: 30</th>
<th>Practical classes: 30</th>
<th>Research work:</th>
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Teaching methods
Combination of interactive approach with practical problem solving.

Grading system (maximum 100 points), grading scale from 5 to 10: below 51 points grade 5, grade 6 from 51-60 points, grade 7 from 61-70 points, grade 8 from 71-80 points, grade 9 from 81-90 points, grade 10 from 91-100 points.

<table>
<thead>
<tr>
<th>Pre-exam obligations</th>
<th>points</th>
<th>Final exam</th>
<th>points</th>
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<tbody>
<tr>
<td>activity during theoretical lectures</td>
<td>10</td>
<td>written exam</td>
<td>30</td>
</tr>
<tr>
<td>practical training</td>
<td>20</td>
<td>oral exam</td>
<td></td>
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<tr>
<td>colloquium(s)/seminar papers</td>
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<tr>
<td>Sum</td>
<td>70</td>
<td>Sum</td>
<td>30</td>
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