**Study program:** Modern computer technologies

**Course title:** Introduction to computer science

**Professor/assistant:** Miloš B. Stojanović

**Type of course:** compulsory

**ECTS credits:** none

**Pre-requisites:**

**Aims of the course:**
Introducing students with the mathematical basics of Modern computer technologies, basics of combinational and sequential circuits, as well as the basics of computers and their hardware.

**Learning outcomes:**
Students are able to: analyze, optimize and realize bool functions, use basic combinational and sequential circuits for the realization of complex logical and arithmetic functions as well as perform the design and synthesis of finite state machines.

**Syllabus**

**Theoretical part**

**Practical part**
Analysis, optimization and realization of bool functions, realization of complex logical and arithmetic functions using combinational and sequential circuits. Design and synthesis of finite state machines.

**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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</thead>
</table>

**Teaching methods**
Theoretical and practical teaching in combination with interactive teaching 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.

**Pre-exam obligations**

<table>
<thead>
<tr>
<th>activity during theoretical lectures</th>
<th>10</th>
<th>Final exam</th>
<th>written exam</th>
<th>30</th>
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</thead>
<tbody>
<tr>
<td>practical training</td>
<td>40</td>
<td>oral exam</td>
<td></td>
<td></td>
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<tr>
<td>colloquium(s)/seminar papers</td>
<td>20</td>
<td></td>
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<tr>
<td><strong>Sum</strong></td>
<td>70</td>
<td><strong>Sum</strong></td>
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<td>30</td>
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