**Study program:** Modern computer technologies

**Course title:** Digital Electronics

**Professor/assistant:** Danijela A. Aleksić

**Type of course:** elective

**ECTS credits:**

**Pre-requisites:**

Aims of the course:
The course aims to provide basic knowledge of the theory of switching amplifiers, flip-flops, logic circuits, counters, shift registers, memories, D/A and A/D converters.

Learning outcomes:
The outcome of the course is to prepare students for the adaption and application of new knowledge in realization of switching amplifiers, flip-flops, logic circuits, counters, shift registers, memories, D/A and A/D converters.

**Syllabus**

*Theoretical part:*

*Practical part:*
- Realization of switching amplifiers and flip-flops. Realization counters and shift registers. All circuits have to be built before measurements according to a circuit diagram. Programming EEPROM. D/A and A/D converters (measurement on experimental boards).

**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>
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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>15</td>
</tr>
<tr>
<td>practical training</td>
<td>10</td>
<td>oral exam</td>
<td>15</td>
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<tr>
<td>colloquium(s)/seminar papers</td>
<td>50</td>
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<td></td>
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<tr>
<td>Sum</td>
<td>70</td>
<td>Sum</td>
<td>30</td>
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