Course syllabus

Software Engineering
<table>
<thead>
<tr>
<th><strong>Type of study programme</strong></th>
<th>Specialist graduate professional study programme - 120 ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Study programme</strong></td>
<td>INFORMATION TECHNOLOGIES</td>
</tr>
<tr>
<td><strong>Course title</strong></td>
<td>Software engineering</td>
</tr>
<tr>
<td><strong>Course code</strong></td>
<td>DIT007</td>
</tr>
<tr>
<td><strong>ECTS</strong> (Number of credits allocated)</td>
<td>6</td>
</tr>
<tr>
<td><strong>Course status</strong></td>
<td>Core</td>
</tr>
<tr>
<td><strong>Year of study</strong></td>
<td>Second</td>
</tr>
<tr>
<td><strong>Course Web site</strong></td>
<td><a href="http://moodle.oss.unist.hr/">http://moodle.oss.unist.hr/</a></td>
</tr>
</tbody>
</table>

**Total lesson hours per semester**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lectures</td>
<td>30</td>
</tr>
<tr>
<td>Seminar</td>
<td>15</td>
</tr>
<tr>
<td>Laboratory exercises &amp; practical demonstration</td>
<td>15</td>
</tr>
</tbody>
</table>

**Prerequisite(s)**

None

**Lecturer(s)**

Department of Information technologies:
Karmen Klarin, MSc, senior lecturer
## COURSE DESCRIPTION

### Course Objectives:
- Understanding basic approach to information systems development with emphasis on analysis of business systems and design new systems.
- Identifying, select and specify user requirements related to the possibility of checking the volume and quality of functionality of the new system.

### Learning outcomes

**On successful completion of this course, student should be able to:**

1. define the basic concepts of information systems development and software engineering,
2. describe a model and recognize the way of requirements specification for software solutions,
3. show the order and use of models and techniques for program development,
4. connect areas and approaches in the product design architecture,
5. propose a model of research and development activities and programming,
6. determine tasks and roles of individual for activities of the program development.

### Course content

CONSTRUCTIVE ALIGNMENT – Learning outcomes, teaching and assessment methods

Alignment of students activities with learning outcomes

<table>
<thead>
<tr>
<th>Activity</th>
<th>Student workload</th>
<th>ECTS credits</th>
<th>Learning outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lectures</td>
<td>30 hours</td>
<td>1 ECTS</td>
<td>1,2,3,4,5,6</td>
</tr>
<tr>
<td>Laboratory work</td>
<td>15 hours</td>
<td>0,5 ECTS</td>
<td>4,5,6</td>
</tr>
<tr>
<td>Seminar</td>
<td>45 hours</td>
<td>1,5 ECTS</td>
<td>3,4</td>
</tr>
<tr>
<td>Self-study</td>
<td>75 hours</td>
<td>2,5 ECTS</td>
<td>1,2,3,4,5,6</td>
</tr>
<tr>
<td>Office hours and final exam</td>
<td>15 hours</td>
<td>0,5 ECTS</td>
<td>1,2,4,5,6</td>
</tr>
<tr>
<td><strong>TOTAL:</strong></td>
<td><strong>180 hours</strong></td>
<td><strong>6 ECTS</strong></td>
<td><strong>1,2,3,4,5,6</strong></td>
</tr>
</tbody>
</table>

CONTINUOUS ASSESSMENT

<table>
<thead>
<tr>
<th>Continuous testing indicators</th>
<th>Performance $A_i$ (%)</th>
<th>Grade ratio $k_i$ (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class attendance and participation</td>
<td>50 – 100</td>
<td>5</td>
</tr>
<tr>
<td>Laboratory tasks</td>
<td>100</td>
<td>20</td>
</tr>
<tr>
<td>Seminar (practical exam)</td>
<td>50 - 100</td>
<td>15</td>
</tr>
<tr>
<td>Preliminary exam I</td>
<td>50 – 100</td>
<td>30</td>
</tr>
<tr>
<td>Preliminary exam II</td>
<td>50 – 100</td>
<td>30</td>
</tr>
</tbody>
</table>

FINAL ASSESSMENT

<table>
<thead>
<tr>
<th>Testing indicators – final exam (first and second exam term)</th>
<th>Performance $A_i$ (%)</th>
<th>Grade ratio $k_i$ (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theoretical exam (written and/or oral)</td>
<td>50 – 100</td>
<td>60</td>
</tr>
<tr>
<td>Previous activities (include all continuous testing indicators)</td>
<td>50 – 100</td>
<td>40</td>
</tr>
<tr>
<td>Testing indicators – makeup exam (third and fourth exam term)</td>
<td>Performance $A_i$ (%)</td>
<td>Grade ratio $k_i$ (%)</td>
</tr>
<tr>
<td>Theoretical exam (written and/or oral)</td>
<td>50 - 100</td>
<td>60</td>
</tr>
<tr>
<td>Previous activities (include all continuous testing indicators)</td>
<td>50 - 100</td>
<td>40</td>
</tr>
</tbody>
</table>
PERFORMANCE AND GRADE

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Criteria</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>50% - 61%</td>
<td>basic criteria met</td>
<td>sufficient (2)</td>
</tr>
<tr>
<td>62% - 74%</td>
<td>average performance with some errors</td>
<td>good (3)</td>
</tr>
<tr>
<td>75% - 87%</td>
<td>above average performance with minor errors</td>
<td>very good (4)</td>
</tr>
<tr>
<td>88% - 100%</td>
<td>outstanding performance</td>
<td>outstanding (5)</td>
</tr>
</tbody>
</table>

ADDITIONAL INFORMATION

Teaching materials for students (scripts, exercise collections, examples of solved exercises), teaching record, detailed course syllabus, application of e-learning, current information and all other data are available by MOODLE system to all students.