**DESCRIPTION OF A STUDY COURSE – SYLLABUS**

<table>
<tr><td>Title of a course</td><td colspan="5">System Design in Telematics</td></tr>
<tr><td>Head of course</td><td colspan="5">Emil Prpić, Lecturer<br>Ivan Grakalić, Lecturer</td></tr>
<tr><td>Study programme</td><td colspan="5">Professional undergraduate study Telematics</td></tr>
<tr><td>Status of a course</td><td colspan="5">Obligatory</td></tr>
<tr><td>Year of study</td><td>2.</td><td>Semester</td><td>IV</td><td>ECTS credits</td><td></td></tr>
<tr><td>Teaching plan<br>(L + E + S+ Pr)</td><td colspan="5">2+2+0+0</td></tr>
<tr><td colspan="6">Goals of a course</td></tr>
<tr><td colspan="6">Introduce students with practical aspects of designing and documenting simple telematic systems.</td></tr>
<tr><td colspan="6">Conditions for enrolling course</td></tr>
<tr><td colspan="6">No conditions</td></tr>
<tr><td colspan="6">Learning outcomes on a level of a study programme which includes course</td></tr>
<tr><td colspan="6"></td></tr>
<tr><td colspan="6">Expected learning outcomes on a level of a course</td></tr>
<tr><td colspan="6">1. Properly interpret the Croatian legislation related to the design work and the project phases and levels<br>2. Describe the types and architecture of telematics system assemblies, as well as their associated cables and their selection<br>3. Independently use design tools (AutoCAD, etc.)<br>4. Independently create project documentation for a smaller telematics system<br>5. Use computer and telecommunications infrastructure as the basis for project development</td></tr>
<tr><td colspan="6">Content of a course</td></tr>
<tr><td colspan="6">Basic definitions of a system. Interactions between systems, processes and environment. Basics of information systems. Basics of connecting systems: computer networks and basics of telecommunication systems. Examples of telematics systems within company and transportation. Basics of system's and projects' design. Definition and purpose of a project. Specificities of HW projects in comparison to SW project. Phases of development project. Project management. Processes and tools of development. Sorts of circuits. Architecture of circuits. Project documentation. Quality insurance.</td></tr>
<tr><td>Teaching modes</td><td colspan="3">☒ lectures<br>☐ auditory exercises<br>☒ seminars and workshops<br>☐ distance learning<br>☐ field classes</td><td colspan="2">☒ individual assignments<br>☐ multimedia and network<br>☐ laboratory<br>☐ supervisor's work<br>☐ other _____</td></tr>
<tr><td>Comments</td><td colspan="5"></td></tr>
<tr><td colspan="6">Students' obligations</td></tr>
<tr><td colspan="6"></td></tr>
<tr><td colspan="6">Grading, evaluation and monitoring of students' work continuously during lectures and exams</td></tr>
<tr><td colspan="6">Grading is based upon evaluation of course's learning outcomes' adoption. Grading is performed continuously during lectures and/or during exam, in compliance with the provisions of Regulation on the assessment of students.</td></tr>
</table>

**Continuous check-up:**

| Outcomes | Pre-exam I | Practical pre-exam | Interactive workshops | Threshold | Max |
|---|---|---|---|---|---|
| **Outcome 1** | **15%** | | | **7,5%** | **15%** |
| **Outcome 2** | **15%** | | | **7,5%** | **15%** |
| **Outcome 3** | | **20%** | | **10%** | **20%** |
| **Outcome 4** | | | **25%** | **12,5%** | **25%** |
| **Outcome 5** | | | **25%** | **12,5%** | **25%** |
| **Percentage of ECTS** | **1,5** | **1** | **2,5** | | **5** |
| **Total** | **30%** | **20%** | **50%** | **50%** | **100%** |

A student has passed the exam if he has acquired a percentage of credits for each learning outcome higher or equal to defined threshold.

**Exam term:**

| Outcomes | Written exam | Oral exam | Max |
|---|---|---|---|
| **Outcome 1** | **5%** | **10%** | **15%** |
| **Outcome 2** | **5%** | **10%** | **15%** |
| **Outcome 3** | **5%** | **15%** | **20%** |
| **Outcome 4** | **0%** | **0%** | **0%** |
| **Outcome 5** | **0%** | **0%** | **0%** |
| **Percentage of ECTS** | | | |
| **Total** | **15%** | **35%** | **100 %** |

A student has passed the exam if he has acquired a percentage of credits for each learning outcome higher or equal to defined threshold.

**Grading:**

A student has passed the exam if he has acquired at least 50% of anticipated credits of a specific learning outcome.

If a student has passed learning outcomes of all courses, the accomplished credits (percentages) of all passed learning outcomes are being added, while the final grade is defined upon following table:

| Range of credits (percentages) | Numerical grade | ECTS grade |
|---|---|---|
| **90,00 – 100,00** | Excellent (5) | A |
| **75,00 – 89,99** | Very good (4) | B |
| **60,00 – 74,99** | Good (3) | C |
| **50,00 – 59,99** | Sufficient (2) | D |
| **0,00 – 49,99** | Insufficient (1) | F |

**Obligatory literature**


1. Autorizirana predavanja
2. Zakon o gradnji
3. Grupa autora: “Uvod u projektiranje sustava za dojavu požara”. Alarm automatika, Rijeka 2010.
4. T. Norman. “Integrated Security Systems Design”,m Butterworth-Heinemann, 2007.


**Additional literature**


1. A. Bhatia, “The MEP Design of Building Services”, http://cedengineering.com