MEĐIMURSKO VELEUČILIŠTE U ČAKOVCU
MEĐIMURJE UNIVERSITY OF APPLIED SCIENCES IN ČAKOVEC

COURSE SYLLABUS

ACADEMIC YEAR: 2025/2026

1. GENERAL COURSE INFORMATION				
1.1 Course name	**Software Engineering and Information Systems**			
1.2 Study program/s	Professional undergraduate study in Computer Engineering			
1.3 Course status (O,E)	O/E	**1.6 Mode of instruction (number of hours)**	**Lectures**	30
1.4 Course code			**Exercises**	30
1.5 Course abbreviation			**Seminars**	
1.6 Semester	V		**E-learning**	Merlin
1.7 ECTS	5	**1.7 Place and time of instruction**	The premises of the Međimurje University of Applied Sciences in Čakovec, according to the schedule published on the website	
2. TEACHING STAF.F				
2.1 Course leader/s-title	PhD, S. Baksa, prof.	**contact**	sbaksa@mev.hr	
		contact		
2.2 Assistant/s- title		**contact**		
		contact		
2.3 Instruction held by- title	PhD, S. Baksa, prof.	**contact**	sbaksa@mev.hr	
2.4 Course leader/s-title		**contact**		
3. COURSE DESCRIPTION				
3.1. Course goals	Acquiring basic knowledge of software engineering. Introduction to the role and importance of information systems in business. Getting to know the software development life cycle. Introduction to the main functionalities of business information systems. An overview of trends in software engineering and information systems.			
3.2 Prerequisites	Object Oriented Programming 1 and Data Base 1			
3.3 Course outcomes	After successfully completing the course, students will be able to: O1 - Present methods of user requests collecting and processing O2 - Justify the need for systematic software testing O3 - Analyze the role of information systems in business management O4 - Present the project of information system preparation and implementation			
3.4 Contribution of the course to the study program	**OS6** Analyze user needs (explore and detect data sources, currently present business systems, technological constraints, specifics of the business environment) **OS13** Develop applications using an object-oriented paradigm in solving program tasks **OS17** Select the appropriate programming language and technology when solving programming tasks			
3.5 Course content	The course presents contents related to the basic aspects of software engineering and information systems. Through the project task, students actively go through the life cycle of software, in parallel learning about the problems of industrial information systems.			

<table>
<tr><td>3.6 Types of coursework</td><td>x</td><td>Lectures</td><td>x</td><td>Exercises</td><td></td><td>Blended e-learning</td><td>x</td><td>Individual activities</td><td></td><td>Laboratory</td></tr>
<tr><td></td><td></td><td>Seminars and workshops</td><td>x</td><td>Distant learning</td><td>x</td><td>Field classes</td><td></td><td>Multimedia and network</td><td></td><td>Mentorship</td></tr>
<tr><td></td><td></td><td>Other</td><td colspan="8"></td></tr>
<tr><td>3.7 Language of instruction</td><td colspan="10">Croatian</td></tr>
<tr><td>3.8 Monitoring students' work (enter the number of ECTS credits for each activity so that the total number of ECTS credits is equal to the total ECTS value of the course, 1 ECTS = 30 hours)</td><td colspan="10">
<table>
<tr><td>1,0</td><td>Class attendance</td><td></td><td>Seminars</td><td></td><td>Research</td></tr>
<tr><td>1,5</td><td>Midterm exams/written exam</td><td>1,5</td><td>Project</td><td></td><td>Essay</td></tr>
<tr><td>1,0</td><td>Class activity</td><td></td><td>Practical task</td><td></td><td></td></tr>
</table>
<table>
<tr><th>Activity specification</th><th>Percent %</th><th>Points</th></tr>
<tr><td colspan="3">Vrednovanje tijekom nastave</td></tr>
<tr><td>Attendance</td><td>5%</td><td>5</td></tr>
<tr><td>Class activity</td><td>5%</td><td>5</td></tr>
<tr><td>Seminar/ project/ essay</td><td>40%</td><td>40</td></tr>
<tr><td>Midterm exam 1</td><td>25%</td><td>25</td></tr>
<tr><td>Midterm exam 2</td><td>25%</td><td>25</td></tr>
<tr><td colspan="3">Exam assessment for the students who failed to fullfil all the obligatory requirements during the semester</td></tr>
<tr><td>Written exam</td><td>50%</td><td>50</td></tr>
<tr><td>Total:</td><td>100%</td><td>100</td></tr>
</table>
<table>
<tr><th colspan="6">Ways of evaluating learning outcomes</th><th></th></tr>
<tr><th></th><th>Attendance</th><th>Activity</th><th>Mid-term exam 1</th><th>Mid-term exam 2</th><th>Practical work</th><th>Total</th></tr>
<tr><td>Outcome1</td><td></td><td></td><td>15</td><td></td><td>20</td><td>35</td></tr>
<tr><td>Outcome2</td><td></td><td></td><td>10</td><td></td><td>20</td><td>30</td></tr>
<tr><td>Outcome3</td><td></td><td></td><td></td><td>10</td><td></td><td>10</td></tr>
<tr><td>Outcome4</td><td></td><td></td><td></td><td>15</td><td></td><td>15</td></tr>
<tr><td>Outcome not-related</td><td>5</td><td>5</td><td></td><td></td><td></td><td>10</td></tr>
<tr><td>Total</td><td>5</td><td>5</td><td>25</td><td>25</td><td>40</td><td>100</td></tr>
</table>
Points Grade
89 – 100 excellent (5)
76 – 88 very good (4)
63 – 75 good (3)
50 – 62 pass (2)
0 – 49 fail (1)
</td></tr>
<tr><td>3.9 Specific features related to taking the course</td><td colspan="10">A student cannot take the exam if he / she has not submitted the Project Readiness Report (submitted at least 5 days before the exam deadline). The final grade is obtained on the exam period and is the sum of points earned during classes. Students who did not take the midterm exams, access the written part of the exam where all learning outcomes are checked.</td></tr>
<tr><td>3.10 Students obligations</td><td colspan="10">• a full-time student has the right to sit for the exam if he attends classes for a minimum of 70% of the total prescribed number of hours
• a full-time student who attends classes from 50 to 70% of the total prescribed number of hours can exercise the right to take the exam by completing additional teaching activities in agreement with the course teacher</td></tr>
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	• a full-time student who attends a certain course for less than 50% of the prescribed number of hours enrolls in the course the following academic year • a part-time student has the right to sit for the exam if he/she attends classes for a minimum of 30% of the total prescribed number of hours • a part-time student who attends classes for 20 to 30% of the total prescribed number of hours can exercise the right to sit for the exam by completing additional teaching activities in agreement with the course teacher • a part-time student who attends the classes of a certain course for less than 20% of the prescribed number of hours re-enrolls in the course the following academic year	
3.11 Written assignments		
3.12 Required reading	1	Josip Nađ: Programsko inženjerstvo i informacijski sustavi; MEV, skripta, 2020.
3.13 Additional reading	1	Gabriele Piccoli, Federico Pigni: Information Systems for Managers 4.0; Prospect Press, 2019.

4. ADDITIONAL INFORMATION ABOUT THE COURSE	
4.1 Quality control	The quality of the program, teaching process, teaching skills and level of mastery of the material will be established by conducting a written evaluation based on questionnaires, and in other standardised ways and in accordance with the by-laws of the Međimurje University of Applied Sciences in Čakovec.
4.2 Contact the teacher	Students can contact the teacher during the office hours and during classes. All other methods of communication are arranged with the teacher. It is also possible to ask questions by e-mail, which will be answered in 48 hours at the latest. It is desirable for students to come as often as possible for any possible questions during the teacher's office hours.
4.3 Information about the course	It is the obligation of each student to be regularly informed about the course. All notifications about the classes or possible postponement of classes will be posted on the bulletin board and on the website of the University at least 24 hours in advance.

5. ELABORATION OF THEMATIC UNITS

Week	Topic	Course outcome
1.	Introduction	O1,O3
2.	Basic Business Functions	O3
3.	Basic of Software Engineering	O2
4.	Requirement gathering	O1
5.	Software Engineering processes	O1, O2
6.	Testing and implementation	O2
7.	Midterm Exam 1	
8.	Digital Business	O3
9.	Basic of Information Systems	O3
10.	IS: Create or Buy	O4
11.	Value creation with IS	O3
12.	New IS implementation project	O4
13.	IS trends	O3, O4
14.	Recapitulation	O3, O4
15.	Midterm Exam 2	