

DESCRIPTION OF A STUDY COURSE – SYLLABUS

Title of a course	Software Engineering				
Head of course	PhD Marin Kaluža, College Professor				
Study programme	Specialist professional graduate study of Information Technology in Business Systems				
Status of a course	Obligatory				
Year of study	1.	Semester	II	ECTS credits	4
Teaching plan (L + E + S+ Pr)	1L+2E				
Goals of a course					
Acquiring knowledge and competencies in engineering approach to software development and application of various systems development models. Acquisition of software development competencies using the selected software development model when designing and designing software.					
Conditions for enrolling course					
No conditions					
Learning outcomes on a level of a study programme which includes course					
Outcome 1: Apply information and communication systems design methods. Outcome 6: Apply appropriate tools in the implementation of information and communication systems. Outcome 7: Apply methods and techniques for creating and managing databases. Outcome 8: Apply methods and techniques for managing security and data protection in information and communication systems.					
Expected learning outcomes on a level of a course					
<ol style="list-style-type: none"> 1. Explain the scope and range of software engineering activities. 2. Explain the procedure of system development process, create a system development plan, and explain the characteristics and problems of legacy systems. 3. Explain software development activities, and formulate project documentation for the assigned software being developed. 4. Explain software development models, select the appropriate model, and use the selected development model to develop the assigned software. 5. Analyse the development of other systems, and propose technological and technical improvements. 					
Content of a course					
Concept of program engineering. Formal principles of program engineering. Methods and phases in developing program system. Techniques for modelling program system. Modelling object structures. Modelling processes, namely objects' behaviour. Shaping processes in a logical and physical level. Shaping program modules with emphasis put on uniform approach. Shaping users' interface. Aims and techniques of programming. Organisation of program team. Overview of program languages and tools. Creation of a prototype. Fast development of applications and usage of RAD tools. Managing program system. Planning and managing development project. Evaluation of program system's costs. Maintenance of program system. Managing configuration of program system. Quality insurance. Documenting program system.					
Teaching modes	<input checked="" type="checkbox"/> lectures <input type="checkbox"/> auditory exercises <input checked="" type="checkbox"/> seminars and workshops <input type="checkbox"/> distance learning <input type="checkbox"/> field classes		<input checked="" type="checkbox"/> individual assignments <input type="checkbox"/> multimedia and network <input type="checkbox"/> laboratory <input type="checkbox"/> supervisor's work <input type="checkbox"/> other _____		
Comments					
Students' obligations					

Grading, evaluation and monitoring of students' work continuously during lectures and exams

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.

Continuous check-up:

Outcomes	Theoretical exam (written exam)	Practical exam 1 - project (individual work)	Practical exam 2 - project (group work)	Practical exam 3 - critical review	Threshold	Max
Outcome 1	10%				5%	10%
Outcome 2	5%		5%		5%	10%
Outcome 3	5%	20%	5%		15%	30%
Outcome 4	5%	20%	5%		15%	30%
Outcome 5				20%	10%	20%
Percentage of ECTS	1	1,6	0,6	0,8		
Total	25%	40%	15%	20%	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	Theoretical part (oral / written exam)	Practical part Project	Max
Outcome 1	10%		10%
Outcome 2	5%	5%	10%
Outcome 3	5%	25%	30%
Outcome 4	5%	25%	30%
Outcome 5		20%	20%
Percentage of ECTS	1	3	
Total	25%	75%	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. Materials used in the courses in Software Engineering course available on Moodle.

Additional literature

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