

(pieczęć wydziału)

COURSE DESCRIPTION

Z1-PU7

WYDANIE N1

Strona 1 z 3

1. Course title: SOFTWARE PROJECT			2. Course code: SP	
3. Validity of course description from: 2018/2019				
4. Level of studies: 1 st cycle of higher education				
5. Mode of studies: intramural studies				
6. Field of study: INFORMATYKA (RAU)				
7. Profile of studies: general academic				
8. Specialization: COMPUTER GRAPHICS AND SOFTWARE				
9. Semester: VI				
10. Faculty teaching the course: Faculty of Automatic Control, Electronics, and Computer Science				
11. Course instructors: dr inż. Dariusz Myszor;				
12. Course classification: specialty courses				
13. Course status: compulsory				
14. Language of instruction: English				
15. Pre-requisite qualifications: completed course: Fundamentals of Computer Programming; Software Engineering				
16. Course objectives: The objective of the course is to provide knowledge necessary to understand aspects of team work over the design and implementation of software system / application. Important part of the course is practical to the students issues related to design and implementation of the software by group of people and methods on how to efficiently cope with these issues such as methodical work on the project, internal and external communication, work organization etc.				
17. Description of learning outcomes:				
No.	Learning outcomes description	Method of assessment	Teaching methods	Learning outcomes reference code
1	Ability to select and apply data structures and algorithms in order to realize given task	Project assignment	Project	K1A_W09, K1A_W11, K1A_W12, K1A_W14, K1A_W15, K1A_W22, K1A_U20, K1A_U29, K1A_U27, K1A_U26, K1A_U24
2	Get acquaintance with the latest trends in the area of software development	Project assignment	Project	K1A_W13
3	Ability to apply version control systems and software for dev team management	Project assignment	Project	K1A_U07, K1A_U21

4	Ability to plan and organize individual work as well as team work in dev team	Project assignment	Project	K1A_K01, K1A_U31
5	Ability to cooperate in dev team and ability to realize various task in such team.	Project assignment	Project	K1A_U30, K1A_K01, K1A_K02

18. Teaching modes and hours

Lecture - Laboratory - Project 45

19. Syllabus description:

Software Project:

1. Preparation of software environment
 - a. General description of utilities exploited during software development.
 - b. Justification of selected components.
2. Basic UML model
 - a. Outline of the use case model in the form of a diagram and description of primary scenarios.
 - b. Outline of the class model necessary to implement the foreground scenarios.
3. Classes and interfaces
 - a. An interaction model that implements a selected use cases presented in the form of flowcharts and interaction diagrams.
 - b. Sub-model of classes that are necessary for the implementation of described use cases, with the visible responsibility of classes and interfaces.
 - c. Specification of interfaces for individual classes.
 - d. The division of tasks between individual team members.
4. Presentation of the solution
 - a. Preparation of the presentation addressed to the "management of the company".
 - b. Presentation of prepared presentation.
5. Implementation
 - a. Internal specification showing those parts of the source code in which there are references to interfaces set at the design stage.
 - b. A short external specification documenting the application interface used to launch the implemented interaction.

20. Exam: no

21. Primary sources:

- G. Booch, J. Rumbaugh, I. Jacobson: "UML. Przewodnik użytkownika", WNT, Warszawa, 2001, 2002
- G. Schneider, J. Winters, „Stosowanie przypadków użycia”, WNT 2004
- R.S. Pressman, „Praktyczne podejście do inżynierii oprogramowania”, WNT 2004
- S. Wrycza, B. Marcinkowski, K. Wyrzykowski: „Język UML 2.0 w modelowaniu systemów informatycznych”, Helion, Warszawa, 2006.
- I. Sommerville: "Software engineering", Addison-Wesley, Reading, New York 2004
- J. Górski (red.): „Inżynieria oprogramowania w projekcie informatycznym”, wyd. II rozszerzone. Mikom, Warszawa 2000
- Jaskiewicz: "Inżynieria oprogramowania", Helion, 1997
- P. Szmal (red.): "Inżynieria programowania. Metody i ćwiczenia laboratoryjne", Skrypt uczelniany Politechniki Śląskiej nr 2120, Gliwice, 1998
- W. Dąbrowski, A. Stasiak, M. Wolski: „Modelowanie systemów informatycznych w języku UML 2.1”, PWN , Warszawa 2009.

22. Secondary sources:		
• -		
23. Total workload required to achieve learning outcomes		
No.	Teaching mode :	Contact hours / Student workload hours
1	Lecture	- / -
2	Classes	- / -
3	Laboratory	- / -
4	Project	45 / 45
5	Seminar	- / -
6	Other	- / -
	Total	45 / 45
24. Total hours: 90		
25. Number of ECTS credits:¹ 3		
26. Number of ECTS credits allocated for contact hours: 2		
27. Number of ECTS credits allocated for in-practice hours (laboratory classes, projects): 1		
26. Comments: -		

Approved:

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(date, Instructor's signature)

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(date , the Director of the Faculty Unit signature)

¹ 1 punkt ECTS – 30 godzin.