

FACULTY OF COMPUTER SCIENCE AND MANAGEMENT

**SUBJECT CARD**

**Name in Polish** Przedsięwzięcia informatyczne w zarządzaniu

**Name in English** Software Project in Management

**Main field of study (if applicable):** Management

**Specialization (if applicable):** Organizational Management

**Level and form of studies:** 1<sup>st</sup> full-time

**Kind of subject:** optional

**Subject code** IEZ1212

**Group of courses** NO

	Lecture	Classes	Laboratory	Project	Seminar
Number of hours of organized classes in University (ZZU)	30		15		
Number of hours of total student workload (CNPS)	60		30		
Form of crediting	crediting with grade		crediting with grade		
For group of courses mark (X) final course					
Number of ECTS points	2		1		
including number of ECTS points for practical (P) classes			1		
including number of ECTS points for direct teacher-student contact (BK) classes	1		0,5		

\*delete as applicable

**PREREQUISITES RELATING TO KNOWLEDGE, SKILLS AND OTHER COMPETENCES**

1. Knowledge of methods of analysis and modeling of management information systems

**SUBJECT OBJECTIVES**

O1 Obtaining detailed knowledge of selected traditional and modern methods of project management.

O2. Gaining knowledge of software sizing and estimation of expenditures.

O3. Acquire the skills of computer-aided project management.

O4. Acquiring the ability of computer-aided modeling of computer application.

**SUBJECT EDUCATIONAL EFFECTS**

relating to knowledge:

PEK\_W01 – obtain the knowledge of the methods of planning and control of the project computer.

PEK\_W02 - knows the possibility of using tools in project management.

PEK\_W03 - knows the basic modeling of management information systems to support management solutions to common problems and issues in the particular areas of functional organization.

PEK\_W04 – obtain the knowledge of the measurement of the size and complexity of software

relating to skills:

PEK\_U01 - knows how to develop a WBS structure and timetable of the project information.

PEK\_U02 - is able to create using the tools of computer models of simple applications.

PEK\_U03 - can use the tools to support the planning and monitoring of the the project.

PEK\_U04 - knows how to determine the size and complexity of the software, as well as estimate the amount of expenditures.

PEK\_U05 - can present adopted and developed solutions, participate in discussions and justify solutions developed

### PROGRAMME CONTENT

Form of classes - lecture		Number of hours
Lec 1	Introduction to the project management. Layers and management roles in the project. WBS.	2
Lec 2	Models of the life cycle of an IT project. Key products stages information enterprises.	2
Lec 3	The starting stage of the project. Critical success factors of the project	2
Lec 4	Planning of information enterprise: CPM, CCS. Control of the project information (using EVM)	2
Lec 5	Tools to support project management - MS Project	2
Lec 6	Aspects of computer application design: the database design data, the application menu	2
Lec 7	Size and complexity metrics of the software	2
Lec 8	FP and UCP methods- examples of applications	2
Lec 9	Project expenditure estimation methods Part 1	2
Lec 10	Project expenditure estimation methods Part 2	2
Lec 11	Change in project management. Communication and documentation of the project.	2
Lec 12	Traditional methodologies and standards in the management of IT projects (PMI, Prince, RUP, CMM model, ISO 9000, IEEE)	2
Lec 13	Adaptive and agile methodologies (Crystal, XP, Scrum, ....)	2
Lec 14	Attributes and models of software quality	2
Lec 15	Assessment	2
	Total hours	30
Form of classes - class		Number of hours
Cl 1		
Cl 2		
Cl 3		
	Total hours	
Form of classes - laboratory		Number of hours
Lab 1	Establish the topic of the work and the range of applications. Presentation of computer-aided modeling and management application tools,	2
Lab 2	Building detailed models (users' needs)	2
Lab 3	Preparing the schedule. First checkpoint	2

Lab 4	EV method. Second checkpoint	2
Lab 5	Verification of the model - development of DFD. Calculation of size of applications (FP method). Third checkpoint	2
Lab 6	Project development and application report. The creation of RDB. 4 <sup>th</sup> checkpoint	2
Lab 7	Presentation	2
Lab 8	Summary, Assessment	1
	Total hours	15
<b>Form of classes - project</b>		<b>Number of hours</b>
Proj 1		
Proj 2		
Proj 3		
	Total hours	
<b>Form of classes - seminar</b>		<b>Number of hours</b>
Sem 1		
Sem 2		
Sem 3		
	Total hours	
<b>TEACHING TOOLS USED</b>		
N1. computer N2. multimedia projector N3. PC utility applications: Ms PowerPoint, Ms Word, Ms Excel, Ms Access, Ms Visio, Ms Project N4. blackboard		

#### EVALUATION OF SUBJECT EDUCATIONAL EFFECTS ACHIEVEMENT

Evaluation (F – forming (during semester), P – concluding (at semester end))	Educational effect number	Way of evaluating educational effect achievement
F1	PEK_U02	report
F2	PEK_U01	report
F3	PEK_U02, PEK_U03, PEK_U04	report
F4	PEK_U03, PEK_U05	report
P1	PEK_W01, PEK_W02, PEK_W03, PEK_W04	test
PW (lecture) = P1 PL (laboratory) = F1+F2+F3+F4, evaluation according to a spot marking scale		
<b>PRIMARY AND SECONDARY LITERATURE</b>		

**PRIMARY LITERATURE:**

- [1] Schwalbe K., Managing Information Technology Projects, CENGAGE Learning  
 [2] Cockburn A., Agile Software Development, McGraw-Hill  
 [3] Capers Jones, Applied software measurement - assuring productivity and quality, McGraw-Hill

**SECONDARY LITERATURE:**

- [1] Hp.Clements, R.Kazman, M.Klein., Evaluating software architectures - methods and case studies, Addison-Wesley  
 [2] Garmus D., Herron D., Function Point Analysis, Addison-Wesley 2001  
 [3] Womack S., Jones D., Lean thinking., ProdPress 2008

**SUBJECT SUPERVISOR (NAME AND SURNAME, E-MAIL ADDRESS)**

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MATRIX OF CORRELATION BETWEEN EDUCATIONAL EFFECTS FOR SUBJECT  
**Software Project in Management**  
 AND EDUCATIONAL EFFECTS FOR MAIN FIELD OF STUDY Management  
 AND SPECIALIZATION Organizational management

Subject educational effect	Correlation between subject educational effect and educational effects defined for main field of study and specialization (if applicable)**	Subject objectives***	Programme content***	Teaching tool number***
PEK_W01 (knowledge)	K1_ZARZ_W20	O1	Lec1, Lec2, Lec3, Lec4, Lec11, Lec12, Lec13	N1, N2, N3, N4
PEK_W02	K1_ZARZ_W24	O1	Lec5	N1, N2, N3, N4
PEK_W03	K1_ZARZ_W24	O2	Lec6	N1, N2, N3, N4
PEK_W04	K1_ZARZ_W26	O2	Lec7, Lec8, Lec9, Lec10, Lec14	N1, N2, N3, N4
PEK_U01 (skills)	K1_ZARZ_U05, K1_ZARZ_U08	O3	Lab3	N1, N2, N3, N4
PEK_U02	K1_ZARZ_U05, K1_ZARZ_U12, K1_ZARZ_U15, K1_ZARZ_U16	O4	Lab1, Lab2, Lab6	N1, N2, N3, N4
PEK_U03	K1_ZARZ_U05	O3	Lab1, Lab3, Lab4	N1, N2, N3, N4
PEK_U04	K1_ZARZ_U05	O4	Lab5	N1, N2, N3, N4
PEK_U05	K1_ZARZ_U17	O3, O4	Lab7	N1, N2, N3, N4