COURSE DESCRIPTION CARD - SYLLABUS

Course name
Software engineering
Course

Field of study	Year/Semester
Engineering Management	2/4
Area of study (specialization)	Profile of study
	general academic
Level of study	Course offered in
First-cycle studies	English
Form of study	Requirements
full-time	compulsory

Number of hours

Lecture	Laboratory classes	Other (e.g. online)
15		
Tutorials	Projects/seminars	
	15	

Number of credit points

2

Lecturers

Responsible for the course/lecturer:

Ph.D., Eng. Zbigniew Włodarczak,

Mail to: zbigniew.wlodarczak@put.poznan.pl

Phone: +48 61 665 33 87

Faculty of Engineering Management

ul. J. Rychlewskiego 2, 60-965 Poznań

Responsible for the course/lecturer:

Ph.D., Eng. Katarzyna Ragin-Skorecka,

Mail to: katarzyna.ragin-skorecka@put.poznan.pl

Phone: +48 61 665 33 88

Faculty of Engineering Management

ul. J. Rychlewskiego 2, 60-965 Poznań

Prerequisites

Basic course in the design of IT management systems. Efficient use of design support tools (Visio) and database design skills. Understanding the need for design skills and management for the implementation of management information systems.

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Course objective

To familiarize students with the methods and CASEs of software engineering used in the design of information management systems.

Course-related learning outcomes

Knowledge

The student explains and compares various methods and tools for collecting, processing, selecting, and distributing information in the context of software engineering [P6S_WG_08].

The student describes the software product lifecycle, including stages such as creation, implementation, operation, and modification [P6S_WG_15].

The student identifies and classifies basic methods, techniques, tools, and materials used in software engineering, such as tools for requirements management, prototyping, and cost estimation [P6S_WG_16].

The student lists basic principles of safety and hygiene and describes their application in the work environment of a software engineer [P6S_WG_18].

Skills

The student designs and conducts experiments and computer simulations, analyzes, and interprets results in the context of software development and testing [P6S_UW_09].

The student applies analytical, simulation, and experimental methods to formulate and solve problems in software engineering, including in the process of requirements engineering [P6S_UW_10].

The student takes responsibility for individual and group IT projects, adhering to teamwork principles and project management methodologies, such as the P-CMM model [P6S_UO_01].

Social competences

The student analyzes and evaluates cause-and-effect relationships in the software creation process, making decisions regarding task prioritization and resource management [P6S_KK_02].

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Lectures: problem tasks to do during the lecture, exam

Project: assessment of current work on the design of the application logical model project, ready documentation of the application logical model

Programme content

The course program includes the following issues: creation, implementation, operation and modification of an IT system, integration of IT systems, software engineering tools, functional, domain, system and user requirements; requirements engineering process; requirements management; software prototyping; software customization; management of IT systems implementation; personnel management of IT projects - the P-CMM model; estimating the cost of the software.

Teaching methods

Lecture - informative lecture, seminar, case study

Laboratories - laboratory method, project method, brainstorming, demonstration method

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Bibliography

Basic

Borucki A. (2012). E-Biznes. Wydawnictwo Politechniki Poznańskiej. Poznań.

Kolbusz E., Olejniczak W., Szyjewski Z. (2005). Inżynieria systemów informatycznych w e-gospodarce. PWE. Warszawa.

Sommerville I. (2003). Inżynieria oprogramowania. WNT. Warszawa.

Jaszkiewicz A. (1997). Inżynieria oprogramowania. Helion. Gliwice.

Additional

Szpringer W. (2012). Innowacyjne modele e-biznesu. Difin. Warszawa.

Flasiński M.(2008). Zarządzanie projektami informatycznymi.PWN

Breakdown of average student's workload

	Hours	ECTS
Total workload	50	2,0
Classes requiring direct contact with the teacher	30	1,0
Student's own work (literature studies, preparation for project classes, preparation for tests, project preparation) [1]	20	1,0

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1 delete or add other activities as appropriate