Information systems design - course description

General information

Course name	Information systems design
Course ID	11.3-WE-AutP-ISD-Er
Faculty	Faculty of Computer Science, Electrical Engineering and Automatics
Field of study	Automatic Control and Robotics
Education profile	academic
Level of studies	First-cycle Erasmus programme
Beginning semester	winter term 2019/2020

Course information

Semester	6
ECTS credits to win	3
Course type	optional
Teaching language	english
Author of syllabus	• dr inż. Jacek Bieganowski

Classes forms

The class form	Hours per semester (full-time)	Hours per week (full-time)	Hours per semester (part-time)	Hours per week (part-time)	Form of assignment
Lecture	30	2	-	-	Credit with grade
Laboratory	30	2	-	-	Credit with grade

Aim of the course

Abilities and competence in: Information System (IS) design stages: analysis, design, coding, testing, implementation and maintenance; analysis and modelling of user requirements; use of computer-based tools for IS systems design; user interface realisation techniques; design of IS systems in context of database applications

Prerequisites

Database systems

Scope

Basic concepts. The concept of an information system and information technology. Design process location in the life cycle of the system. Design methodologies. Applications. Stages of design. CASE tools and techniques. *The life cycle of the system*. Phases of the construction of the system: strategic, identifying user requirements, analysis, design, implementation, installation, testing, maintenance. *The analysis and structural design.* Modelling the entities relations - basic conventions and definitions (entities, unions, fields, attributes). *Object-oriented analysis and design.* Technology, notation, tools. Unified Modelling Language UML. *Designing a user interface*. Text and graphical interfaces. Interface ergonomics. *CASE tools*. Presentation of selected tools with special emphasis on ones that support the creation of database information systems.

Teaching methods

lecture: practical classes, conventional lecture

laboratory: laboratory exercises, work in groups, project method

Learning outcomes and methods of theirs verification

Outcome description	Outcome symbols	Methods of verification	The class form
Knows the stages of designing information systems		• an evaluation test	• Lecture
Is able to design an information system using computer tools		• a preparation of a project	• Laboratory
Can model the system based on user requirements analysis		• an evaluation test	• Lecture
Can design a graphical user interface		• an ongoing monitoring during classes	• Laboratory
He knows the life cycle of the information system		• an evaluation test	• Lecture

Assignment conditions

Lecture – written test.

Laboratory – written test, project.

Recommended reading

1. Meek J.L. Communications in Applied Numerical Method. John Wiley & Sons, Ltd, 1992

2. Susan M. Weinschenk, GUI Design Essentials. Wiley Computer Publishing 1997.

3. Roszkowski J.: Anaysis and structural programming, Helion, Gliwice, 2002 (in Polish)

4. Barker R.: Case Method SM Function and Process Modeling, Addison-Wesley, 1992

Further reading

Notes

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Modified by dr inż. Jacek Bieganowski (last modification: 02-05-2020 16:16)

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