COURSE DESCRIPTION CARD - SYLLABUS

Course name

Design and usage of information systems

Course

Field of study

Management and Production Egineering

Year/Semester

2/4

Area of study (specialization)

Computerisation in Production

Profile of study

general academic

Level of study

Second-cycle studies

Course offered in

Polish

Form of study

part-time

Requirements

elective

Number of hours

Lecture

8

Laboratory classes

Other (e.g. online)

Tutorials

Projects/seminars

8

Number of credit points

2

Lecturers

Responsible for the course/lecturer:

PhD Ewa Dostatni

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Faculty of Mechanical Engineering

Piotrowo 3 60-965 Poznań

Responsible for the course/lecturer:

Prerequisites

Has knowledge of the use of information technology in the enterprise, knows the basics of designing relational databases. Can handle computer hardware and use system software and basic applications such as: text editor, spreadsheet, presentation graphics program. He can design a database for various functional areas of the company. He can work in a team, he sees the need for continuing education, can use information technology in a production enterprise.

Course objective

Understanding the theoretical and practical issues related to the design of information systems for management support, with particular emphasis on database design.

Course-related learning outcomes

Knowledge

Knows the assumptions of the methodology of designing the management information system. Has knowledge about various life cycles of the management information system. Has knowledge about the possibility of using structural design tools for information systems.

Skills

Is able to choose the life cycle of the IT system depending on the input requirements. Can use the methodology of the information system design in practice.Is able to use the basic tools of the methodology to the designed information management system. Can apply the tools and methods of IT project management.

Social competences

The student is creative, responsible for decisions, can determine the priorities of the activities. Student is able to cooperate with the team. Is aware of the role of computerization in engineering activities.

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Intermediate rating

Project: based on the assessment of the current progress of the implementation of project tasks.

Lecture: based on the answers to questions about the material discussed in previous lectures.

Summary rating:

Project: credit on the basis of an independently developed project of the IT system module. In order to pass the project must be assessed positively and all required tasks included in the project must be carried out.

Lecture: credit based on test consisting of open questions in a scale 0-1. Test is passed after obtaining at least 55% of all points. Discussion of the test results. Test is carried out at the end of the semester.

Programme content

Lecture:

Basic information on the phases of the IT system life cycle.

Methods and methods of designing information systems.

Designing databases in the IT system life cycle.

Contemporary techniques of structural design of information systems.

Data flow diagrams (DFD).

Methods for decomposing DFD diagrams.

Modeling of entity relations (identifying entities, attributes and relationships).

Documenting the IT system project.

Project:

Implementation of the project of the selected IT system module (SI) of management. Conducting requirements analysis, defining functional and non-functional requirements, performing a user interface project, developing a database model, usage case diagram and data flow diagram. Development of a planning schedule for the SI design process using MS Project.

Teaching methods

Lecture: multimedia presentation illustrated with examples given on a board, problem solving.

Project: solving practical problems, searching for sources, teamwork, discussion.

Bibliography

Basic

1. Górski J. (red.) – Inżynieria oprogramowania w projekcie informatycznym, Mikom, Warszawa 2000

2. Elmasri R., Navathe S.B., Fundamentals of database systems, The Benjamin/Cummings Publishing Company, Redwood City CA 94065 1994

3. Dąbrowski W., Subieta K., Podstawy inżynierii oprogramowania, Wydawnictwo PJWSTK, Warszawa 2002

4. Sommerville I., Inżynieria oprogramowania, Wydawnictwa Naukowo-Techniczne, Warszawa 2006

Additional

1. Cadle J., Yeates D., Zarządzanie procesem tworzenia systemów informatycznych, Wydawnictwa Naukowo-Techniczne, Warszawa 2004

Breakdown of average student's workload

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

[1] delete or add other activities as appropriate