COURSE DESCRIPTION CARD - SYLLABUS

Course name
Design of management information systems [S1ZiIP2>PSIZ]

Course

Field of study
Management and Production Engineering

Year/Semester
3/6

Area of study (specialization)
–

Profile of study
general academic

Level of study
first-cycle

Course offered in
Polish

Form of study
full-time

Requirements
elective

Number of hours

Lecture
15

Laboratory classes
15

Other
0

Tutorials
0

Projects/seminars
0

Number of credit points

2,00

Coordinators

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Lecturers

Prerequisites

It has knowledge of the construction and operation of a computer. It can operate a computer, know how to use the basic tools of MS Office to support engineering activities. It has a sense of responsibility for their own work, to understand the need to learn and acquire new knowledge.

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:

Laboratory: 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 51% of all points. Discussion of the test results. Test is carried out at the end of the semester.
Assignment of grades to percentage ranges of results: <90-100> very good; <80-90) good plus; <70-80) good; <60-70) satisfactory plus; <50-60) satisfactory; <0-50) unsatisfactory

Programme content

Management information system
Software engineering
Databases

Course topics

Lecture:
Methodologies and methods of designing information systems. Basic knowledge and principles of database design (concepts, definitions, features, classification). Designing databases in the life cycle of an IT system. Modeling entity relationships (identifying entities, attributes and relationships). Documenting the IT system project.
Laboratory:
Basics of designing entity-relationship models for relational databases. Methodology for designing a relational model for a management information system. Implementation of a relational model for an IT system. Development of a user interface for the IT system.

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:
Górski J. (red.) - Inżynieria oprogramowania w projekcie informatycznym, Mikom, Warszawa 2000
Sommerville I., Inżynieria oprogramowania, Wydawnictwa Naukowo-Techniczne, Warszawa 2006
Beynon-Davies P., Systemy baz danych, WNT, Warszawa, 1998
Rojek-Mikołajczak I, Bazy danych, Wydawnictwo Akademii Bydgoskiej, Bydgoszcz, 2004
Mark Whitehorn, Bill Marklyn, Relacyjne bazy danych, Helion, Warszawa 2003

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

Breakdown of average student's workload

	Hours	ECTS
Total workload	50	2,00
Classes requiring direct contact with the teacher	30	1,00
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	20	1,00