



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

Designing Management Information Systems

### Course

Field of study

Year/Semester

Engineering management

1/1

Area of study (specialization)

Profile of study

Managing enterprise of the future

general academic

Level of study

Course offered in

Second-cycle studies

polish/english

Form of study

Requirements

full-time

compulsory

### Number of hours

Lecture

Laboratory classes

Other (e.g. online)

30

Tutorials

Projects/seminars

15

### Number of credit points

3

### Lecturers

Responsible for the course/lecturer:

dr hab. inż. Joanna Kałkowska, prof. PP

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Faculty of Engineering Management

ul. Jacka Rychlewskiego 2, 60-965 Poznań

Responsible for the course/lecturer:

dr inż. Aleksander Jurga

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### Prerequisites

The student has knowledge of the foundations of management, organization and the basics of computer science. In addition, he can integrate knowledge acquired in other subjects as well as interact and work in a team.

### Course objective

The aim of the course is to present the important role of information management and to provide students with knowledge in the design and modeling of information and decision making processes in an enterprise

### Course-related learning outcomes

Knowledge



1. Student knows the methods and tools for data collection, processing and selection and distribution of information in the area of information processes in management.
2. Student has knowledge of methods and tools for modeling information and decision-making processes
3. Student has knowledge of the conditions of organizational structures and knows structure-building mechanisms and methods of modeling information and decision-making processes
4. Student has knowledge about the connections occurring in network and virtual organizations (concerns, holdings, clusters, etc.) and about organizational dependencies between organizational units of an enterprise.

#### Skills

1. Student is able to use theoretical knowledge and obtain data to analyze information processes in management.
2. Student is able to forecast and model complex social processes including phenomena from various areas of social life (cultural, political, legal, economic) using advanced methods and tools for modeling information and decision-making processes.
3. Student has the ability to use and integrate acquired knowledge in various areas and forms, extended by a critical analysis of effectiveness and its usefulness for modeling information and decision-making processes
4. Student is able to indicate the reasons and has the ability to independently propose solutions to a specific management problem and its verification using tools for modeling information and decision-making processes.

#### Social competences

1. Student is aware of the interdisciplinary knowledge and skills needed to solve complex organization problems and the need to create interdisciplinary teams.
2. Student is able to see the cause-and-effect relationships in achieving the set goals and rank the importance of alternative or competitive tasks.

#### Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Knowledge acquired during the lecture is verified by a test carried out after the last lecture. The tests consist of 20 closed questions. Assessment threshold: 50% of the points (satisfactory).

Knowledge acquired under the project is verified on the basis of solving individual tasks covered by subsequent project stages. The student receives points for each task. Assessment threshold: 50% of the points (satisfactory).

#### Programme content



Lecture: Basic concepts (design, management, system). The essence of the management system. Management system in static and dynamic terms. Reengineering. Data and information (information, its functions and important features). The concept and structure of MIS (resource structure, functions of MIS implemented in information processes, goals of implementing MIS in the enterprise, requirements and stages of creating MIS). MIS a IT system (information gap). IT systems supporting SI. Modeling of information and decision-making processes in an enterprise (the essence and scope of modeling). Standards (notations) and modeling tools. Designing management information systems (ARIS Toolset and / or Adonis) in EPC and / or BPMN notation.

Design: Designing and modeling management information systems using the ARIS Toolset and / or Adonis.

### Teaching methods

Monographic lecture in the form of a multimedia presentation, with elements of a conversational lecture. Project: solving case study using the ARIS Toolset and / or Adonis.

### Bibliography

#### Basic

1. Adamczyk M., Jurga A., Kałkowska J, Pawłowski E., Włodarkiewicz-Klimek H., Projektowanie systemów informacyjnych zarządzania, Wydawnictwo Politechniki Poznańskiej, Poznań, 2010
2. Grudzewski W.M., Metody projektowania systemów zarządzania, Difin, Warszawa 2004
3. Klonowski Z., Systemy informatyczne zarządzania przedsiębiorstwem, Modele rozwoju i właściwości funkcjonalne, Wydawnictwo Politechniki Wrocławskiej, Wrocław, 2004
4. Gabryelczyk R., ARIS w modelowaniu procesów biznesu, Difin, Warszawa, 2006

#### Additional

1. Jurga A., ARIS platform jako narzędzie modelowania procesów biznesowych. Notacja EPC a BPMN, Zeszyty Naukowe nr 702. Ekonomiczne problemy usług nr 87. Gospodarka elektroniczna. Wyzwania rozwojowe. Tom 1, Wydawnictwo Naukowe Uniwersytetu Szczecińskiego, Szczecin 2012
2. Jurga A., Wybrane aspekty modelowania procesów biznesowych, Zeszyty Naukowe nr 762. Ekonomiczne Problemy Usług nr 104. Europejska przestrzeń komunikacji elektronicznej. T. 1, Wydawnictwo Naukowe Uniwersytetu Szczecińskiego, Szczecin 2013, 207-217
3. Drejewicz Sz., Zrozumieć BPMN. Modelowanie procesów biznesowych, Wyd. Helion, Gliwice 2012
4. Jurga A., Technologia teleinformatyczna w organizacji wirtualnej, Wydawnictwo Politechniki Poznańskiej, Poznań 2010



### Breakdown of average student's workload

	Hours	ECTS
Total workload	75	3,0
Classes requiring direct contact with the teacher	45	2,0
Student's own work (literature studies, preparation for projects, preparation for tests) <sup>1</sup>	30	1,0

<sup>1</sup> delete or add other activities as appropriate