



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

Management information systems

### Course

Field of study

Engineering Management

Area of study (specialization)

Level of study

First-cycle studies

Form of study

full-time

Year/Semester

3/6

Profile of study

general academic

Course offered in

Polish

Requirements

compulsory

### Number of hours

Lecture

15

Laboratory classes

Tutorials

15

Projects/seminars

Other (e.g. online)

### Number of credit points

3

### Lecturers

Responsible for the course/lecturer:

Ph.D., Eng. Aleksander Jurga

Responsible for the course/lecturer:

Mail to: [aleksander.jurga@put.poznan.pl](mailto:aleksander.jurga@put.poznan.pl)

Faculty of Engineering Management

ul. J. Rychlewskiego 2, 60-965 Poznań

### Prerequisites

1. Knowledge: Knowledge of the basics of management, organization science and computer science.
2. Skills: Interpretation and description of the legal bases and processes affecting the functioning of an enterprise.
3. Social competencies: Group work, interest in IT techniques. Awareness of the social context of business operations and understanding of basic social phenomena.

### Course objective

Understand the role of information in the enterprise management process, including: data collection and interpretation supporting decision-making processes affecting the efficiency of the enterprise. The ability to model management information systems.



## Course-related learning outcomes

### Knowledge

1. Knows methods and tools for collecting, processing and selecting and distributing information in the field of information processes in management [P6S\_WG\_08].
2. Knows methods and tools for modeling information processes in management [P6S\_WG\_06].
3. He knows the trends in the use of information systems in business management [P6S\_WG\_06].
4. Has expanded and in-depth knowledge of the sciences necessary to understand and describe the issues of managing organizations [P6S\_WG\_01].
5. He knows the research methodology and methods and tools for modeling processes between market participants [P6S\_WG\_10].

### Skills

1. Is able to use basic theoretical knowledge and obtain data to analyze specific processes and social phenomena (cultural, political, legal, economic) in the field of management [P6S\_UW\_01].
2. Is able to implement the self-education process as part of the subject under study [P6S\_UU\_01].

### Social competences

1. Is able to search and select education and training centers in order to supplement and improve knowledge and skills [P6S\_KK\_01].
2. Is aware that creating products that meet the needs of users requires a systematic approach taking into account technical, economic, marketing, legal, organizational and financial issues [P6S\_KO\_02].
3. Is able to see the cause-and-effect relationship in achieving the set goals and grading the significance of alternative or competitive tasks [P6S\_KK\_02].

## Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Formative assessment:

- a) In the field of lectures: Scored written tests (closed questions) or on the eMoodle platform at the end of individual thematic blocks of lectures. Passing threshold min. 50 points. Each lecture ends with control questions as help to solve tests.
- b) In the field of exercises: implementation of exercises, practical test on a komputer. In the scope of exercises: implementation of exercise tasks related to modeling of MIS using IT tools; current assessment of individual exercises. Passing threshold min. 50 points.

Summary:

- a) In the field of lectures: assessment based on the sum of accumulated test points.
- b) In the field of exercises: assessment based on the sum of accumulated points.



## Programme content

### Lectures:

As part of the course, an overview of issues related to Management Information Systems will be presented. The scope of classes includes, among others: Information processes in management (basic concepts: including data vs. information and its important features). SI system (construction, resource structure and quality requirements). Information security (cryptographic methods and systems, digital signature). Information gap. IT systems supporting SI (evolution of IT systems, typology, IT design methodologies). Expert systems (structure of SE construction and their role in supporting information processes). Modeling of management information systems (ARIS Toolset) in EPC and / or BPMN notation.

### Exercises:

Applies to selected aspects of management information system modeling. They include exercises in modeling selected management information systems, followed by their improvement. Designing measures of success for objective models. Exercises are carried out using EPC and BPMN notation.

## Teaching methods

Information lecture: multimedia presentation, illustrated with examples on the board.

Work with a book.

Demonstration method.

Exercise method: multimedia presentation illustrated with examples given on a blackboard and performance of tasks given by the teacher - practical exercises.

## Bibliography

### Basic

1. Jurga A., Pojęcie i budowa systemu informacyjnego [w]: Adamczyk M., Jurga A i inni, Projektowanie systemów informacyjnych zarządzania, Wyd. Politechniki Poznańskiej, Poznań, 2010.
2. Jurga A., System informacyjny a system informatyczny [w]: Adamczyk M., Jurga A i inni, Projektowanie systemów informacyjnych zarządzania, Wyd. Politechniki Poznańskiej, Poznań, 2010.
3. Wybrane aspekty niwelacji luki informacyjnej oraz jej wpływ na użyteczność informacji. Case study. Jurga A., [w]: Woźniak M. (red.), Społeczeństwo informacyjne – technologie, informacja i wiedza w gospodarce. Zeszyty Naukowe nr 35. Wyd. Uniwersytetu Rzeszowskiego, Rzeszów, 2013, s. 226-236....
4. Procesy informacyjne w zarządzaniu, red. Nowicki A., Sitarska M., Wyd. Uniwersytetu Ekonomicznego, Wrocław, 2010.
5. Sieci komputerowe – bezpieczeństwo. Cz. 1, Metody i systemy kryptograficzne, Karpiński M., Kurytnik I. P., Wyd. Akademii Techniczno-Humanistycznej, Bielsko-Biała, 2006.



6. ARIS w modelowaniu procesów biznesu, Gabryelczyk R., Defin, Warszawa, 2006.
7. Zrozumieć BPMN. Modelowanie procesów biznesowych, Drejewicz Sz., Wyd. Helion, Gliwice 2012.

Additional

1. Klonowski Z., Systemy informatyczne zarządzania przedsiębiorstwem. Modele rozwoju i właściwości funkcjonalne. PW, Wrocław, 2004.
2. Kisielnicki J., Sroka H., Systemy informacyjne biznesu, Placet, Warszawa 2005
3. Strategia doskonalenia systemu informacyjnego w zarządzaniu przedsiębiorstwem, Nowicki A., Wyd. Akademii Ekonomicznej, 1999.
4. Kenneth C., Laudon J.P., Management Information Systems, Prentice Hall, New Jersey, 2001
5. Sommerville I., Inżynieria Oprogramowania, Wyd. WNT 2006.
6. ARIS platform jako narzędzie modelowania procesów biznesowych. Notacja EPC a BPMN, Jurga A., Zeszyty Naukowe nr 702. Ekonomiczne problemy usług nr 87. Gospodarka elektroniczna. Wyzwania rozwojowe. Tom 1, Wydawnictwo Naukowe Uniwersytetu Szczecińskiego, Szczecin 2012.
7. Wybrane aspekty modelowania procesów biznesowych, Jurga A., Zeszyty Naukowe nr 762. Ekonomiczne Problemy Usług nr 104. Europejska przestrzeń komunikacji elektronicznej. T. 1, Wydawnictwo Naukowe Uniwersytetu Szczecińskiego, Szczecin 2013, 207-217.

**Breakdown of average student's workload**

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

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