COURSE DESCRIPTION CARD - SYLLABUS

Course name
Management of Information Systems in Industry 4,0

Course

Field of study	Year/Semester
Engineering Management	1/2
Area of study (specialization)	Profile of study
Managing Enterprise of the Future	general academic
Level of study	Course offered in
Second-cycle studies	Polish
Form of study	Requirements
part-time	compulsory

Number of hours

Lecture	Laboratory classes	Other (e.g. online)
10		
Tutorials	Projects/seminars	
	10	

Number of credit points
2

Lecturers

Responsible for the course/lecturer:

Pd.D., Eng. Michał Trziszka

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Faculty of Engineering Management

ul. J. Rychlewskiego 2, 60-965 Poznań

Responsible for the course/lecturer:

Prerequisites
Basic knowledge of Industry 4.0

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Course objective

The aim of the course is to present the IT systems used by Industry 4.0 and the possibilities of managing them.

Course-related learning outcomes

Knowledge

knows in depth the methods and tools for modeling information and decision-making processes [P7S_WG_02]

has in-depth knowledge of the determinants of organizational structures knows structure-forming mechanisms and methods of modeling and changing organizational structures [P7S_WG_05]

has knowledge of the connections in network organizations (concerns, holdings, clusters, etc.) and in-depth knowledge of organizational dependencies between organizational units of the enterprise, as well as virtual units [P7S_WG_06]

has extensive knowledge of systems, objects and technical devices, understands their role and importance in shaping economic organizations [P7S_WG_10]

Skills

is able to use theoretical knowledge to describe and analyze the causes and course of social processes and phenomena (cultural, political, legal, economic) and is able to formulate own opinions and select critically data and analysis methods [P7S_UW_01]

has the ability to independently propose solutions to a specific management problem and carry out a decision-making procedure, in this scope [P7S_UW_04]

is able to make a critical analysis of the existing technical solutions in a functioning economic organization and propose their restructuring and improvements [P7S_UW_09]

is able to take responsibility for own work and jointly performed tasks, and manage the work in a team [P7S_UO_01]

Social competences

is aware of the interdisciplinary nature of knowledge and skills needed to solve complex organizational problems and the need to create interdisciplinary teams [P7S_KK_01]

can see the cause-effect relationships in the implementation of the set goals and rank the importance of alternative or competitive tasks [P7S_KK_02]

is able to plan and manage business ventures [P7S_KO_03]

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Knowledge acquired during the lecture is verified by one colloquium at the last lecture. The test consists of 10-15 questions (test and open), variously scored. Passing threshold: 50% of points. Final issues on

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the basis of which questions are prepared will be sent to students by e-mail using the university e-mail system.

During exercises, students work in groups on specific topics, which they present in the form of a multimedia presentation. For each of the 7 tasks students receive grades (7 grades). The final grade is the average of these 7 ratings. The content of the tasks is related to the subject, and the scope of tasks includes lecture issues.

Programme content

1. Discussion of Industry 4.0 as a modern concept.

2. Presenting IT solutions for intra-company communication.

3. Cloud solutions - solution review and operation overview.

4. Implementation of cloud computing in the enterprise - virtualization, VPS servers for Public and Private Cloud.

5. Cloud computing management using Public Cloud.

Teaching methods

Lecture: multimedia presentation, illustrated with examples on the board.

Project: lecturers - multimedia presentation, students - multimedia and graphic presentation (poster), short lecture, lecture

Bibliography

Basic

Scrum. O zwinnym zarzadzaniu projektami, Chrapko Mariusz, Helion, 2014

Czwarta rewolucja przemysłowa Schwab Klaus, Wydawnictwo Emka, 2018

Additional

Breakdown of average student's workload

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

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[1] delete or add other activities as appropriate