

FACULTY OF MANAGEMENT SUBJECT CARD Name of subject in Polish Usługi chmurowe Name of subject in English Cloud computing services Main field of study (if applicable): Business Engineering Specialization (if applicable): Business Intelligence Profile: academic Level and form of studies: 2nd level, full-time Kind of subject: obligatory Subject code W08IZZ-SM8017 Group of courses YES					
	Lecture	Classes	Laboratory	Project	Seminar
Number of hours of organized classes in University (ZZU)			15		15
Number of hours of total student workload (CNPS)			25		25
Form of crediting			crediting with grade		crediting with grade
For group of courses mark (X) final course			X		
Number of ECTS points			2		
including number of ECTS points for practical classes (P)					
including number of ECTS points corresponding to classes that require direct participation of lecturers and other academics (BU)			1,36		

PREREQUISITES RELATING TO KNOWLEDGE, SKILLS AND OTHER COMPETENCES

1. Basic understanding of multi-tier architecture and Internet applications.

SUBJECT OBJECTIVES

C1 Acquire knowledge of the capabilities and applications of modern cloud technologies in management, supporting the functioning of organizations and in the work of the engineer-manager.
 C2 Acquire skills in selecting and configuring cloud services, and deploying selected applications.

SUBJECT EDUCATIONAL EFFECTS

relating to knowledge:

PEU_W01 Has knowledge of the operation and functionality of cloud technologies and services.

PEU_W02 Has knowledge of the applications of cloud services in management, supporting the operations of organizations and in the work of engineers/managers.

relating to skills:

PEU_U01 Can acquire the information necessary to identify modern cloud technologies and services, can compare offerings in the vendor market and match them to the organization's needs.

PEU_U02 Can identify features, advantages, disadvantages and applications of existing cloud technologies and can critically evaluate them.

PEU_U03 Can implement selected solutions to support the operations of organizations and the work of engineers/managers.

PROGRAMME CONTENT

Laboratory		Number of hours
Lab 1	Discussing the safety and class regulations as well as the scoring/grading policy.	1
Lab 2	1A. Hosting services: creating an account, overview of applications in the app installer, installing and testing a Content Management System.	2
Lab 3	1B. Overview of the features of a hosting server. File management. Discussing results and crediting tasks 1A and 1B.	2
Lab 4	2A. Hosting services: installing and implementing a selected Internet application.	2
Lab 5	2B: Overview and deployment of selected applications/plugins. Discussing results and crediting tasks 2A and 2B.	
Lab 6	3A. Cloud services of a leading global provider, such as Microsoft Azure. Deploying selected applications.	2
Lab 7	3B. Deploying virtual machines and working with a remote desktop of a cloud workstation. Discussing results and crediting tasks 3A and 3B.	2
Lab 8	Retake class and extra tasks. Grading.	2
	Total hours	15

Seminar		Number of hours
Semin 1	Introduction to the seminar. Discussing the class rules and the scoring/grading policy. Allocation of topics to be presented.	1
Semin 2	Types of clouds and models of cloud services. The benefits of cloud computing.	2
Semin 3	Basic file storage and synchronization services.	2
Semin 4	Cloud solutions offered by leading global providers such as Microsoft, Amazon, Google, IBM, Oracle.	2
Semin 5	Cloud solutions offered by Polish and EU companies, such as Octawave, Beyond.	2
Semin 6	Applications of the cloud in various areas of business activity.	2
Semin 7	Component selection and migration to the cloud. Reliability, security and legal aspects.	2
Semin 8	Challenges of the future and directions of cloud services development. Summary of the topics discussed throughout the semester.	2
	Total hours	15

TEACHING TOOLS USED

- N1. Resources published in the university ePortal course website.
- N2. Lab assignment lists and seminar topics.
- N3. Google, Microsoft, Amazon and Oracle cloud web services.
- N4. Scientific elaboration of topics based on literature analysis.
- N5. Presentation of issues at the seminar - slideshow or software, and discussion.
- N6. Group discussion.

EVALUATION OF SUBJECT LEARNING OUTCOMES ACHIEVEMENT

Evaluation (F – forming during semester), P – concluding (at semester end)	Learning outcomes code	Way of evaluating learning outcomes achievement
F1	PEU_W01, PEU_W02	Evaluation of the content and presentation of the seminar essay and participation in the discussion.
F2	PEU_U01, PEU_U02, PEU_U03	Evaluation of the lab assignments and reports.
P = 0,5*F1 + 0,5*F2. Passing scores of both F1 and F2 required.		
PRIMARY AND SECONDARY LITERATURE		
<u>PRIMARY LITERATURE:</u> [1] Papers, links and instructions published in the university ePortal course website. [2] Haque E., The Ultimate Modern Guide to Cloud Computing: Everything from Cloud Adoption to Business Value Creation. IP 2020. [3] Ainsley A., Google Cloud Platform: Learn Google Cloud Platform from the Scratch: The Ultimate Guide for Beginners, IP 2020. [4] Gouic B., Microsoft Azure Tutorial: Public Cloud Computing platform. GB 2020.		
<u>SECONDARY LITERATURE:</u> [1] Hunter T., Building Google Cloud Platform Solutions: Develop scalable applications from scratch and make them globally available in almost any language, Packt Publishing, 2019. [2] Toroman M., Azure Networking Cookbook: Practical recipes for secure network infrastructure, global application delivery, and accessible connectivity in Azure, Packt Publishing, 2021.		
SUBJECT SUPERVISOR (NAME AND SURNAME, E-MAIL ADDRESS)		
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