

Cloud computing - course description

General information	
Course name	Cloud computing
Course ID	11.3-WE-BizEIP-PrzetwChmurach-Er
Faculty	Faculty of Computer Science, Electrical Engineering and Automatics
Field of study	E-business
Education profile	practical
Level of studies	First-cycle Erasmus programme
Beginning semester	winter term 2021/2022

Course information	
Semester	5
ECTS credits to win	3
Course type	obligatory
Teaching language	english
Author of syllabus	dr inż. Anna Pławiak-Mowna, prof. UZ

Classes forms					
The class form	Hours per semester (full-time)	Hours per week (full-time)	Hours per semester (part-time)	Hours per week (part-time)	Form of assignment
Lecture	15	1	-	-	Credit with grade
Laboratory	30	2	-	-	Credit with grade

Aim of the course

Raising awareness for the benefits of using cloud computing in electronic business. Familiarize students with the selected cloud services available with Google Cloud Platform, Microsoft Azure Cloud Platform, and other vendor and cloud service providers.

Prerequisites

None.

Scope

Introduction to cloud computing. Review of commercial services of cloud computing.

Cloud computing principles and service models: Infrastructure as a Service, Platform as a Service, Software as a Service, Service, Software + Services and Integration Platform as a Service.

Criteria for making decisions when ordering services for business needs. Selecting the appropriate cloud services and cloud providers according to the cloud users. The commercial applications and services of Microsoft, Google, Amazon, Dropbox and Box. The major vendor and service providers that offer cloud platforms for development, management, and deployment of applications to commercial customers.

Teaching methods

Conventional lectures

Laboratory: practical classes, laboratory classes

Learning outcomes and methods of theirs verification

Outcome description	Outcome symbols	Methods of verification	The class form
Knowledge of virtualization systems and services in cloud computing		a test with score scale	Lecture
Knowledge of the construction and principles of cloud computing models		a test with score scale	Lecture
Can properly evaluate requirements of cloud e-business applications		programming project	Laboratory
Can secure e-business applications in the cloud		programming projects	Laboratory
Knowledge of the possibilities of using cloud computing in e-business		a test with score scale	Lecture
Can transfer the application to a cloud-computing environment		programming projects	Laboratory

Assignment conditions

The following guidelines will be used to establish the final grade for the course: the passing condition is to obtain positive marks from all exercises and tests conducted during the semester.

Calculation of the final grade: lecture 50% + laboratory 50%

Grades will be administered using the standard 90% = 5, 80% = 4.5, 70% = 4, 60% = 3.5, 50% = 3.

Specifically, 100 – 90 = 5, 89 - 80 = 4.5, 79 - 70 = 4, 69 - 60 = 3.5, and 59 - 50 = 3.

Recommended reading

1. Banijamali A., Pakanen OP., Kuvaja P., Oivo M.: Software architectures of the convergence of cloud computing and the Internet of Things: A systematic literature review, *Information and Software Technology*, 122, 2020, doi.org/10.1016/j.infsof.2020.106271.
2. Collier M., Shahan R.: *Microsoft Azure Essentials: Fundamentals of Azure*, Fundamentals of Azure Second Edition, Microsoft Press, 2016.
3. Dimitri N.: Pricing cloud IaaS computing services. *Journal of Cloud Computing* (2192-113X). 2020;9(1):1.
4. Global Cloud Applications Industry (2020 to 2025) - Rising Number of Startups and SMEs in Economically Developing Countries Presents Opportunities - ResearchAndMarkets.com
5. Rehman, T. B. *Cloud Computing Basics*. Mercury Learning & Information, 2018.

Further reading

1. Amazon Web Services (AWS) documentation - <https://docs.aws.amazon.com/>
2. Box - <https://box.com/>
3. Dropbox - <https://dropbox.com/>
4. Google Cloud documentation - <https://cloud.google.com/docs>
5. Kurniawan A., Lau W.: *Practical Azure Functions : A Guide to Web, Mobile, and IoT Applications* Vol. 1st ed. Berkeley, CA: Apress, 2019.
6. Microsoft Azure documentation - <https://azure.microsoft.com>
7. PR Newswire: Mindtree Recognized as an Expert Managed Service Provider for Microsoft Azure. *PR Newswire US*, 10 Sept. 2020.

Notes

None.

Modified by dr inż. Anna Pławiak-Mowna, prof. UZ (last modification: 12-07-2021 12:54)

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