University of Gdańsk

Subject card

Subject name and code	Cloud Computing, PG_00178492		
Field of study	Informatics and Econometrics		
Date of commencement of studies	October 2026	Academic year of realisation of subject	2028/2029
Education level	Bachelor's studies	Subject group	Obligatory subject group in the field of study Optional subject group Subject group related to scientific research in the field of study
Mode of study	part-time studies	Mode of delivery	at the university
Year of study	3	Language of instruction	Polish
Semester of study	5	ECTS credits	7.0
Learning profile	academic	Assessment form	credit
Conducting unit			
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. Michał Kuciapski	
	Teachers		

Lesson types

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	8.0	0.0	32.0	0.0	0.0	40

E-learning hours included: 0.0

Learning activity and number of study hours

Learning activity	Participation in didactic classes included in study plan	Participation in consultation hours	Self-study	SUM
Number of study hours	40	2.0	133.0	175

Subject objectives

Learning back-end and front-end programming languages for web applications through cloud computing.
Acquiring skills in programming and hosting dynamic sites in the cloud using data storage services.
Using server-less services to create scalable applications.
Using artificial intelligence in applications thanks to cloud computing services.
Using Platform-as-a-Service and Infrastructure-as-a-Service solutions.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[IiEL3_W06] To an advanced degree, the student knows and understands the processes and methods of creating, developing, and providing appropriate conditions for using informatics or statistics tools, particularly those that improve human and organizational functioning.	Understands the principles and specifics of cloud programming.	[SW2] presentation/project/paper/ report
[IiEL3_U02] Students can select or construct econometrics, informatics or statistics tools and apply them to describe and solve economic and social problems.	Coding in web applications access to databases hosted in the cloud.	[SU2] presentation/project/paper/ report
[IiEL3_U12] The student can design and implement IT systems to enhance business operations and effectively utilize modern ICT technologies for management and business communication.	Programs dynamic web applications hosted in the cloud. Uses artificial intelligence to recognize data. Seeks to solve the presented problem using cloud computing applications.	[SU2] presentation/project/paper/ report

Subject contents	Podstawy programowania w chmurze: Języki programowania w chmurze Dedykowane interfejsy API do programowania w chmurze Rozwój witryny w chmurze: Planowanie wdrożenia witryny Konfigurowanie podstawowych parametrów witryny Projektowanie interfejsu użytkownika witryny Programowanie funkcjonalności witryny Hostowanie witryny w chmurze Monitorowanie wdrożenia witryny Publikowanie aplikacji internetowej Warstwa zaplecza witryny: Podejście architektoniczne REST Programowanie kontrolerów REST Front-End Layer for a Site: Front-End Frameworks Przygotowanie Front-End witryny Programowanie komunikacji Front-End i Back-End dla witryny Dostęp do baz danych hostowanych w chmurze: Tworzenie bazy danych w chmurze Programowanie połączenia z bazą danych Programowanie CRUD Dostęp do danych usługi przechowywania w aplikacji:

	Programming Access to Blobs Reading and Writing Data to Non-Relational Tables Programming File I/O Cloud Programming Basics: Cloud Programming Languages Dedicated Cloud Programming APIs Cloud Site Development: Planning a Site Deployment Configuring Basic Site Parameters Designing a Site User Interface Programming Site Functionality Hosting a Site in the Cloud Monitoring Site Deployment Publishing a Web App Back-End Layer for a Site: REST Architectural Approach Programming REST Controllers Front-End Layer for a Site: Front-End Frameworks Preparing a Site Front-End Programming Front-End and Back-End Communications for a Site Accessing Cloud-Hosted Databases: Creating a Cloud Database Programming a Database Connection CRUD Programming Accessing Storage Service Data in an Application: Programming Access to Blobs Reading and Writing Data to Non-Relational Tables Programming File I/O
Prerequisites and co-requisites	Non-relational database solutions, Front-end frameworks, Distributed application programming.
Assessment methods and criteria	<table><tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr><tr><td>Number of points for the final project</td><td>51.0%</td><td>100.0%</td></tr></table>
Recommended reading	<table><tr><td>Basic literature</td><td>1. Fryźlewicz Z., Nikończuk D., Windows Azure. Wprowadzenie do programowania w chmurze, Helion 2022</td></tr><tr><td>Supplementary literature</td><td>1. Sunilkumar Manvi Gopal Shyam, Cloud Computing. Concepts and Technologies, Taylor & Francis 2024</td></tr><tr><td>eResources addresses</td><td></td></tr></table>
Example issues/ example questions/ tasks being completed	1. Develop a business application that uses a broad set of cloud computing services for data storage, processing, and visualization.
Work placement	Not applicable

Document generated electronically. Does not require a seal or signature.