GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Database management systems, PG_00045381		
Field of study	Data Engineering		
Date of commencement of studies	October 2024	Academic year of realisation of subject	2027/2028
Education level	first-cycle studies	Subject group	Optional subject group Subject group related to scientific research in the field of study
Mode of study	Full-time studies	Mode of delivery	at the university
Year of study	4	Language of instruction	Polish
Semester of study	7	ECTS credits	4.0
Learning profile	general academic profile	Assessment form	assessment
Conducting unit	Department of Software Engineering -> Faculty of Electronics, Telecommunications and Informatics		
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. inż. Agnieszka Landowska	
	Teachers	dr hab. inż. Agnieszka Landowska	

Lesson types and methods of instruction

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	15.0	0.0	15.0	0.0	0.0	30

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	30	3.0	67.0	100

Subject objectives

Subject aims at practical knowledge and skills of database systems administration, including security, efficiency and safety management.

Learning outcomes

Course outcome	Subject outcome	Method of verification

Subject contents

1. Introduction to database systems management. DBA tasks. 2. Database system architecture an example of Oracle DBMS 3. Management of logical and physical database structures. 4. Database system security privileges, roles and users 5. Database system security creating archives and restoring 6. Database system security replication. 7. Database system performance tracking 8. Database system performance database tuning, capacity planning 9. Database system performance query optimization mechanisms 10. Database system performance clusters 11. Distributed databases management, partitioning. 12. Distributed databases optimization. 13. Database systems migration, large data sets loading. 14. Failure models of database systems and restore processes. Bug tracking and problem solving. 15. Automation of DBA tasks

Prerequisites and co-requisites

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
Midterm colloquium	50.0%	40.0%
Practical exercise	50.0%	60.0%

Recommended reading

Basic literature	Wykład: 1. Christian Antognini, "Troubleshooting Oracle Performance", Apress 2008 2. Elke Phelps, Paul Jackson, "Oracle Applications DBA Field Guide", Apress 2006 3. Ron Ben Natan, "HOWTO Secure and Audit Oracle 10g and 11g", Taylor & Francis Group 2009 4. Sam R. Alapati, "Expert Oracle Database 11g Administration", Apress 2009 Laboratorium: 1. Oracle Documentation Library 10g. 2 Day DBA. 2. Oracle Documentation Library 10g. Administrator"s Guide 3. Oracle Documentation Library 10g. Instalation Guide 4. Oracle Documentation Library 10g. Performance Tuning Guide
Supplementary literature	No requirements
eResources addresses	Adresy na platformie eNauczanie:

Example issues/ example questions/ tasks being completed	
Work placement	Not applicable

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