GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Databases in Transport Company Management, PG_00045214		
Field of study	Transport and Logistics, Transport and Logistics		
Date of commencement of studies	October 2020	Academic year of realisation of subject	2021/2022
Education level	first-cycle studies	Subject group	
Mode of study	Full-time studies	Mode of delivery	at the university
Year of study	2	Language of instruction	Polish
Semester of study	3	ECTS credits	3.0
Learning profile	general academic profile	Assessment form	assessment
Conducting unit	Information Technology Unit -> Faculty of Ocean Engineering and Ship Technology		
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Tacjana Niksa-Rynkiewicz	
	Teachers	dr inż. Tacjana Niksa-Rynkiewicz	

Lesson types and methods of instruction

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	15.0	0.0	30.0	0.0	0.0	45

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	45	5.0	25.0	75

Subject objectives

The aim of the course is to familiarize students with the possibilities of using programs and the procedures available in them during laboratory classes that enable:

- designing knowledge systems,
- creating relational databases,
- creating simple sql queries using queries
- creating forms and reports enabling printouts.
- The software necessary to perform the tasks is Ms WORD, Ms Visio, Ms Access

Learning outcomes

Course outcome	Subject outcome	Method of verification
K6_U03	Mastering the skills of using Ms Visio Creating an ER schema using the Chen method and object-oriented method. Knowledge of the principles of creating a conceptual model of a relational database	[SU2] Assessment of ability to analyse information [SU1] Assessment of task fulfilment [SU4] Assessment of ability to use methods and tools
[K6_W04] has a basic knowledge in IT, electronics, automation and control, computer graphics useful to understand the possibilities of their application in transport	Mastering the ability to create a real database in the Ms Access environment Mastering design skills in the Ms Visio environment	[SW1] Assessment of factual knowledge

Subject contents

Program content (subject of classes):
1. Introduction to databases; discussion of literature and rigor of crediting. Basic concepts, the problem of redundancy, independence, integrity.
2. File database - application, examples
3. Relational database - relationship modeling
4. ER scheme (Chen method)
6. Data types in Access
7. Relational model summary: concepts, dependencies and normalization, pros and cons of normalization.
8. Database design - documentation
9. ER scheme using the objective method
10. Ms Access - creating databases, tables, relationships
11. Ms Access - creating queries - queries
12. Ms Access - creating queries - queries
13. Ms Access - creating forms and reports
14. Presentation and discussion of exemplary implemented database projects
15. Presentation and discussion of exemplary implemented database projects

Prerequisites and co-requisites

knowledge of the terminology of programming in English

Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	project	60.0%	90.0%
	activity	50.0%	10.0%

Recommended reading	Basic literature	Banachowski Lech: *Bazy danych. Tworzenie aplikacji*. Akademicka Oficyna Wydawnicza PLJ, Warszawa, 1998. ISBN 83-7101-377-9. Ullman, J.D., J. Widom: Podstawowy wykład z systemów baz danych. WN-T, Warszawa, 1999 (tłum. z języka ang., wyd. 1997). ISBN 83-204-2394-5. Boratyn Dariusz: *MS ACCESS 2.0. System, oblicze, ku aplikacjom*. Wydawnictwo CROMA, Wrocław, 1995. ISBN 83-86343-30-3. Boratyn Dariusz: *Microsoft Office ACCESS 97. System, oblicze, ku aplikacjom*. Wydawnictwo CROMA, Wrocław, 199. ISBN 83-86343-27-2. Cassel, O. i C. Eddy: *ACCESS 97. Baza danych dla każdego*. Wydawnictwo HELION, Gliwice, 1999. ISBN 83-7197-067-6. Kopertowska M. i Ł. Jaroszewski: *Ćwiczenia z bazy danych ACCESS 97*. EDU-MIKOM, Warszawa, 1997. ISBN 83-87102-031-8. Kopertowska M. Europejskie Komputerowe Prawo Jazdy. Bazy Danych. (ECDL). ZNI MIKOM, Warszawa, 1999. ISBN 83-87102-62-8. Kuciński K.: *Poznajemy Accessa. Wszystko co chciałeś wiedzieć o MS ACCESS ale nie miałeś kogo zapytać*. Wyd. Edition 2000, Kraków 1999, ISBN 83-87297-50-X. *Microsoft Access 2.0 – krok po kroku*. Oficyna Wydawnicza READ ME, Warszawa, 1994. ISBN 83-85769-86-2. *Microsoft Access 97 – krok po kroku*. Wydawnictwo RM, Sp. Z o.o., Warszawa, 1997. ISBN 83-87216-09-7. Norton, P., V. Andersen: *Microsoft ACCESS 2000 PL. Programowanie według Petera Nortona*.. ZNI MIKOM, Warszawa, 2000. ISBN 83-7279-058-2. Nowakowska M. i E. Zając: *Access. Programowanie aplikacji*. EDU-MIKOM, Warszawa, 1998. ISBN 83-87102-57-1. Palmer S.: *Access 2 dla opornych*. Oficyna Wydawnicza READ ME, Warszawa, 1995. ISBN 83-7147-017-7. Prague C.N., M.R. Irwin: Access 97 Biblia, RM, Warszawa, 1998. Simpson, A. i E. Olson: Access 97. Wydawnictwo HELION, 1988. ISBN 83-86718-99-4. Barker, R.: *CASE*Method – modelowanie związków encji*. WNT, 1996. Jaszkiewicz A.: Inżynieria oprogramowania. Wydawnictwo HELION, Gliwice, 1997. ISBN 83-7197-007-2. Yourdon, E.: *Współczesna analiza strukturalna*. WNT, Warszawa, 1996. ISBN 83-204-2067-9.

Supplementary literature	**Teoria baz danych** Benyon-Davies, P.: *Systemy baz danych*. WNT, Warszawa, 1998. ISBN 83-204-2257-4. Cellary W. I Z. Królikowski: *Wprowadzenie do projektowania baz danych. dBase III*. WNT, Warszawa, 1988. ISBN 83-204-1089-4. Connolly, T. C. Begg: Database Systems: *A Practical Approach to Design, Implementation and Management.* Addison-Wesley Longman, 1998. ISBN 0201342871. Date, C.J.: *Wprowadzenie do baz danych*. WNT, Warszawa, 1981. Date, C.J.: *An Introduction to Database Systems*. Sixth Edition. Reading: Addison-Wesley Publishing Company, 1995 (planowane tłumaczenie w WNT). Delobel,C. i M.Adiba: *Relacyjne bazy danych*. WNT, Warszawa, 1989. ISBN 83-204-1025-8. Elmasri, R. and S. B. Navathe: *Fundamentals of Database Systems*. The Benjamin/Cummings Publishing Company, Inc. Redwood City California, 1994. ISBN 0-8053-1753-8. Figura Dariusz: *Obiektowe bazy danych*. Akademicka Oficyna Wydawnicza PLJ, Warszawa, 1996. ISBN 83-7101-336-1. Harris, W.: *Bazy danych nie tylko dla ludzi biznesu*. WNT, Warszawa, 1994. ISBN 83-204-1678-7. Hernandez, M.J.: *Bazy danych dla zwykłych śmiertelników*. EDU-MIKOM, Warszawa, 1998. ISBN 83-87102-52-0. Kim Won: *Wprowadzenie do obiektowych baz danych*. WNT, Warszawa, 1996. ISBN 83-204-2026-1. Muraszkiewicz, M. i H. Rybiński: Bazy danych. Akademicka Oficyna Wydawnicza PLJ, Warszawa, 1993. Pankowski Tadeusz: *Podstawy baz danych*. Wydawnictwo Naukowe PWN, Warszawa, 1992. ISBN 83-01-10570-4. Riordan R.M.: Projektowanie systemów relacyjnych baz danych. Microsoft Press/Wydawnictwo RM, Warszawa, 2000. ISBN 83-7243-103-5. Ullman, J.D.: *Systemy baz danych*. WNT, Warszawa, 1988. ISBN 83-204-0914-4. Ullman, J.D. and J. Widom: *A First Course in Databases*. Prentice Hall, 1997 (istnieje tłumaczenie w WNT). **ORACLE** Austin Dave: *Poznaj Oracle 8*. (Prosto profesjonalnie). ZNI MIKOM, Warszawa, 1999. ISBN 83-7158-153-X.

		Rogers, U.: Oracle. Przewodnik projektanta baz danych. WNT, Warszawa, 1995. Wrembel, R. I W. Wieczerzycki: *Projektowanie aplikacji bazy danych Oracle*. Wydawnictwo NAKOM, Poznań, 1997. ISBN 83-86969-07-5. ISSN 0867-6011. **SQL** Celko J.: SQL Zaawansowane techniki programowania. Mikom, Warszawa, 1999. ISBN 83-7158-221-8. Date, C.J. and H. Darwen: *A Guide to SQL Standard*. Addison-Wesley, 1994. Gruber M.: *SQL – znakomity podręcznik opisujący najnowszy standard SQL-a*. Wydawnictwo HELION, Gliwice, 1996. ISBN-83-86718-32-3. Harrington, J.L.: *SQL dla każdego*. EDU-MIKOM, Warszawa, 1998. ISBN 83-87102-55-5. *SQL – Język relacyjnych baz danych*. WNT, Warszawa, 1995. ISBN 83-204-1806-2. Stephens, R.K. et al.: SQL w 3 tygodnie. LT&P, Warszawa, 1999. ISBN 83-87115-13-4.
	eResources addresses	
Example issues/ example questions/ tasks being completed	TASK: Please propose an entity relationship diagram to remember: planned and carried out cruises, club members and their stages, yachts together with their sailing possibilities (waters they can swim on) for the presented sailing club The sailing club creates a database to facilitate the completion of crews for planned cruises. The yacht-club owns yachts with various nautical (sailing) possibilities, which can sail on various waters. Also, club members - sailors - have different qualifications, allowing them to perform various functions on various cruises. These qualifications are strictly defined by each sailor's degree, confirmed by a patent with a unique number.	
Work placement	Not applicable	