KOLEJ KOMUNITI PASIR GUDANG
SIJIL TEKNOLOGI MAKLUMAT
COURSE OUTLINE

COURSE	DATABASE FUNDAMENTALS		**CREDIT HOUR** :3
PROGRAMME	SIJIL TEKNOLOGI MAKLUMAT		
PREREQUISITE	NONE		
LECTURER	NOORASHIKIN BINTI MUSTAFA		
LECTURER'S ROOM LOCATION	BILIK PENSYARAH 1		
PHONE NUMBER	019-7270013	**EMAIL:** shikin@kkpg.edu.my	
SYNOPSIS	DATABASE FUNDAMENTALS aims to acquaint students with the principles of database systems. Throughout this course, students will become familiar with crafting and overseeing database systems through both Microsoft Access and a primer on SQL (Structured Query Language). The curriculum imparts a blend of theoretical and hands-on expertise, encompassing fundamental database system concepts.		
PROGRAMME LEARNING OUTCOME (PLO)	Upon completion of this programme, students should be able to:		
	PLO 3	perform a range of Information Technology support tasks related to job functions	
	PLO 5	exhibit effective communication with stakeholders and society in a work-related environment.	
	PLO 9	apply principles of personal skills in academic and career development	

COURSE LEARNING OUTCOMES (CLO)	
Upon completion of this course, students should be able to:	
CLO1	Construct a database using Database Management System (DBMS) based on the scenario.
CLO2	Demonstrate with team members the ability to solve problems given in the area of Database Management System (DBMS).
CLO3	Perform a report related to database concepts and theory based on assigned assignments in the field of Database Management Systems (DBMS).

STUDENT LEARNING (SLT)	
a. Lecture (Face to Face)	10
b. Practical (Face to Face)	54
c. Tutorial (Face to Face)	0
d. Others (Face to Face)	0
e. Self Learning (Non Face to Face)	15
f. Continuous Assessment (Face to Face)	6
g. Continuous Assessment (Non Face to Face)	26
h. Final Assessment (Face to Face)	3
i. Final Assessment (Non Face to Face)	6
	120
SLT = (a)+(b)+(c)+(d)+(e)+(f)+(g)+(h)+(i)	**3**
Credit = SLT/40	

COURSE CONTENT				
WEEK	**TOPIC**	**TOPIC DETAIL & TEACHING METHOD**	**CLO, PLO**	**ASSESSMENT**
WEEK 1	**1.0 Introduction to Database Concept**	**THEORY** 1.1 Describe the database function in daily usage 1.2 Identify data model in database system 1.3 Explain the importance of data quality in database	CLO3 / PLO9	-
	2.0 Database Design Theory	**THEORY** 2.1 Describe the main components in database **PRACTICAL** 2.1 Describe the main components in database	CLO3 / PLO9 CLO1 / PLO3	
WEEK 2	**2.0 Database Design Theory**	**PRACTICAL** 2.1 Describe the main components in database 2.2 Identify the relation key used in database system **THEORY** 2.2 Identify the relation key used in database system	CLO1 / PLO3 CLO3 / PLO9	TECHNICAL REPORT (NF2F)
WEEK 3		**PRACTICAL** 2.2 Identify the relation key used in database system **THEORY** 2.3 Explain types of dependency in database	CLO1 / PLO3 CLO3 / PLO9	PROBLEM BASED TASK(F2F)
WEEK 4	**3.0 Entity Relationship And Normalization**	**THEORY** 3.1 Describe the normalization concept **PRACTICAL** 3.1 Describe the normalization concept	CLO2 / PLO5 CLO1 / PLO3	PROBLEM BASED TASK(F2F)
WEEK5		**THEORY** 3.2 Construct the concept of normalization to the database **PRACTICAL** 3.2 Construct the concept of normalization to the database	CLO2 / PLO5 CLO1 / PLO3	-

WEEK	TOPIC	TOPIC DETAIL & TEACHING METHOD	CLO, PLO	ASSESSMENT
WEEK 6	3.0 Entity Relationship And Normalization	**THEORY** 3.3 Construct Entity Relationship Diagram (ERD) to show the relationship of entity sets stored in the database.	CLO2 / PLO5	-
		PRACTICAL 3.2 Construct the concept of normalization to the database 3.3 Construct Entity Relationship Diagram (ERD) to show the relationship of entity sets stored in the database.	CLO1 / PLO3	
WEEK 7		**PRACTICAL** 3.3 Construct Entity Relationship Diagram (ERD) to show the relationship of entity sets stored in the database.	CLO1 / PLO3	MINI PROJECT (NF2F)
WEEK 8		**THEORY** 3.4 Build a simple Relational Database System	CLO2 / PLO5	-
		PRACTICAL 3.3 Construct Entity Relationship Diagram (ERD) to show the relationship of entity sets stored in the database. 3.4 Build a simple Relational Database System	CLO1 / PLO3	
WEEK 9		**PRACTICAL** 3.4 Build a simple Relational Database System	CLO1 / PLO3	-
WEEK 10		**PRACTICAL** 3.4 Build a simple Relational Database System	CLO1 / PLO3	-
WEEK 11		**PRACTICAL** 3.4 Build a simple Relational Database System	CLO1 / PLO3	-
WEEK 12		**PRACTICAL** 3.4 Build a simple Relational Database System	CLO1 / PLO3	MINI PROJECT DEMONSTRATION (NF2F)
WEEK 13	4.0 Structured Query Language (SQL)	**PRACTICAL** 4.1 Construct SQL commands to a database	CLO1 / PLO3	-
WEEK 14		**PRACTICAL** 4.2 Perform SQL commands to a	CLO1 / PLO3	-

		database base on scenario		

CONTINUOS ASSESSMENT (CA) / PB : 70%

Assessment	Quantity	Percentage (%)
Technical Report	1	15%
Problem Based Task	1	15%
Mini Project	1	25%
Mini Project Demonstration	1	15%

FINAL ASSESSMENT (FA) / PA: 30%

Assessment	Quantity	Percentage (%)
Final Assessment	1	30%

Main References

Chua, S., G.,Yew, K., H., Zaliha , Mohamad. & Fatimah , Ismail @ Mohd Nor . (2020). Buku Teks Tingkatan 4 Sains Komputer. Kementerian Pendidikan Malaysia. (ISBN 978-9-83-472013-1)

Walter, Shields. (2019). SQL Quickstart Guide: The Simplified Beginner's Guide to Managing, Analyzing, and Manipulating Data with SQL. . (ISBN 194-5051752)
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Additional Reference (s)

Coronel, C. & Moris, S. (2017). Database Systems: Design, Implementation, and Management, 12th edition. Cencage. (ISBN 978-1-30-562748-2).

Prepared By:

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(NOORASHIKIN BINTI MUSTAFA)

Ketua Program Teknologi Maklumat

Kolej Komuniti Pasir Gudang

Kementerian Pendidikan Tinggi

Date : 24/07/2024

Reviewed by:

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(IZEMAH BINTI ZAKARIAH)

Timbalan Pengarah (Akademik)

Kolej Komuniti Pasir Gudang

Kementerian Pendidikan Tinggi

Date : 25/07/2024