SOF202

Database

Course Information

- **Ms. Subashini A/P Ganapathy**

- **Email : subashini.ganapathy@xmu.edu.my**

- **Office: A1 - 403**

Moodle & Teams Enrollment

- 1. Search for SOF202 Course "**SOF202 DATABASE 2024/09 Subashini Ganapathy**"

- 2. Key in this Enrollment Password : **jay9butterfly**
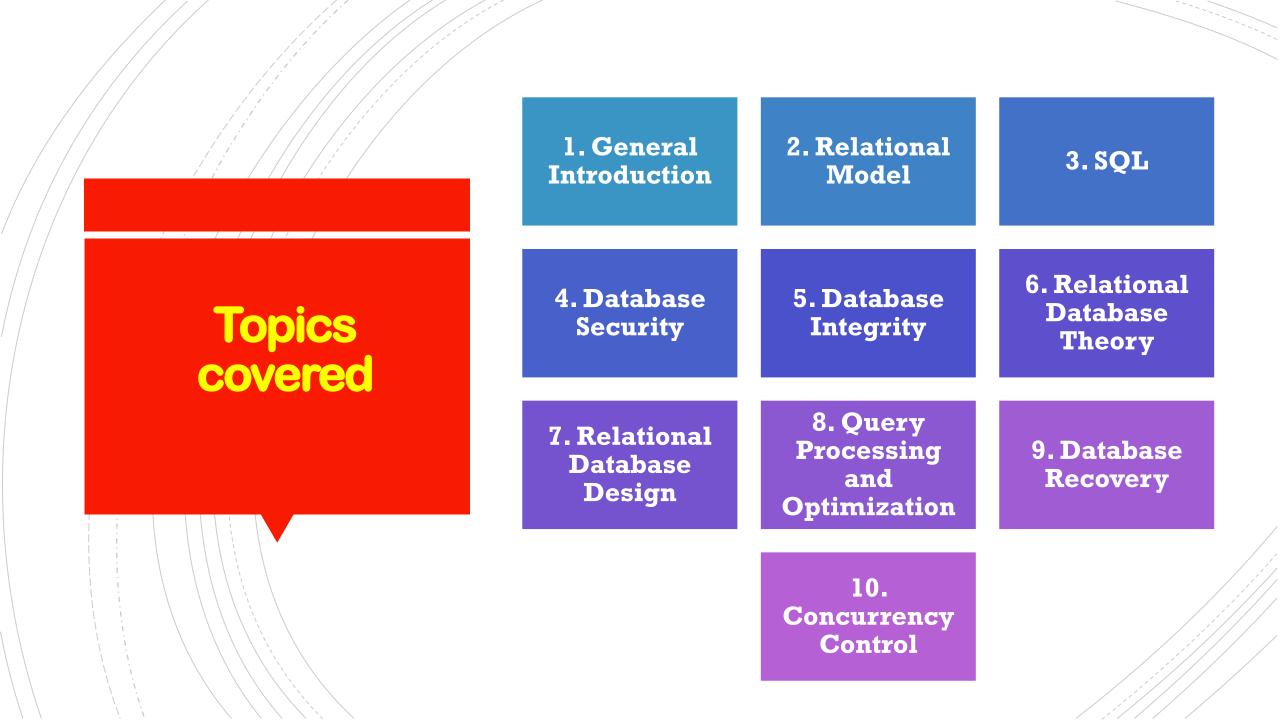
- 3. Microsoft Teams Join Code: [SOF202 (2024/09) | General | Microsoft Teams](#)

Course Objective

❑ To understand the **fundamental methods** and **techniques of databases**, especially **relational databases.**

❑ To learn **how to use SQL.**

Objectives of the Course

❖ Generate **data models** and database designs that help a given application using E R diagrams.

❖ Using **normalization**, build **schema designs**.

❖ Use **SQL** to produce database applications.

❖ To manipulate data, use key relational operations and SQL to **define schema**, **tables**, **indexes**, and **views**, as well as write complex queries.

❖ To achieve **fault recovery** and **concurrency control**, use the **transaction features of a DBMS**.

Course Learning Outcomes

CLO1: Describe the basic theories (**relational algebra, database architecture, normalization and query optimization theories**, etc..) to support the designing of database.

CLO2: Demonstrate **teamwork** for solving problem using database concepts.

CLO3: Use **E-R diagram** to model the database, **transaction** features and of DBMS to achieve **fault recovery** and **concurrency control**.

CLO4: Construct **SQL statements** to define and manage (query and update) relational database for given problem.

Assessment Methods

Continuous Assessment (Grouping)	Percentage
Assignment	25%
Lab Report	15%

Final Assessment (Individual)	Percentage
Examination	60%

Minimum 40 Marks for each assessment, but in overall shall get 55%

Important:
You have to pass all the assessment in order to pass the overall course (Triple Pass Grading System)

Assessment Mapping

Knowledge and Understanding

Course Learning Outcomes (CLO) : At the end of the course the students will be able to: (example) - explain the basic principles of immunisation (C2,PLO1)		Bloom's Taxonomy Level	PLO
CLO1	Describe the basic theories (relational algebra, database architecture, normalization and query optimization theories etc.) to support the designing of databases.	C2	1
CLO2	Demonstrate teamwork for solving problem using database concepts.	A3	4
CLO3	Use E-R diagram to model the database, transaction features of a DBMS to achieve fault recovery and concurrency control.	C3	2
CLO4	Construct SQL statements to define and manage (query and update) relational database for given problems.	C3	2
CLO5			

Interpersonal Skills

Cognitive Skills

Other
Programme Learning Outcome (PLO)

Learning Outcome Domain (LOD)

Knowledge and understanding

Cognitive skills

Practical skills

Interpersonal skills

Communication skills

Digital skills

Numeracy skills

Leadership, autonomy and responsibility

Personal skills

Entrepreneurial skills

Ethics and professionalism

Software Reference

❖ Oracle SQL Developer

❖ https://www.oracle.com/tools/downloads/sqldev-downloads.html

Course References

- Ramez Elmasri, Shamkant Navathe. Fundamentals of Database Systems (7th Edition), Pearson, 2017. (ISBN-10: 9789332582705)

- Nenad Jukic, Susan Vrbsky and Svetlozar Nestorov. Database Systems: Introduction to database and data warehouses (2th Edition), prospect press, 2016 (ISBN-13: 978-1943153190)

- Luc Perkins, Eric Redmond Jim Wilson.seven databases in seven weeks: A guide to modern databases and the NoSQL movement(2th Edition),2018(ISBN-13: 978-1680502534)

Link to Group Assessment Name List (Assignment + Lab Report)

[SOF202 202409 Grouping.xlsx](SOF202%20202409%20Grouping.xlsx)

Phases of database design