

ICT321 Database Systems: Modelling and Design

Level: 3

Credit Units: 5 Credit Units

Language: ENGLISH

Presentation Pattern: EVERY JULY

Synopsis:

This course offers perspectives on relational databases, based on the storage of data as tables. It highlights the use of databases in key organisational information systems. There is in depth coverage of data modelling and the theory of relations as applied to the representation of models of data. The practical use of the database language SQL will be extensively covered, using MySQL.

Topics:

- Introduction to Databases and SQL
- The Relational Model and Normalisation
- Database Design Using Normalisation
- Data Modelling with the ER Model
- Transforming Data Models into Database Designs

Textbooks:

David M. Kroenke and David J. Auer: Database Processing Fundamentals, Design and Implementation (13th ed. ISBN:9781292004860;12th ed. ISBN:9780132570114) 14th edition Pearson
ISBN-13: 9781292107639

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Learning Outcome:

- Apply database processing concepts to solve the information requirements of organizations
- Compose the appropriate SQL code to perform queries on a relational database
- Analyse the data requirements to design databases for new information systems
- Assess the Logical Model for modification anomalies
- Solve common design problems
- Formulate SQL code, including those requiring calculation functions, to query database
- Design a relational database based on the RM principles
- Construct conceptual (ER) and logical models from a statement of requirements

Assessment Strategies:

Continuous Assessment Component	Weightage (%)
QUIZ	9
TUTOR-MARKED ASSIGNMENT	21
Sub-Total	30

Examinable Component	Weightage (%)
Written Exam	70
Sub-Total	70

Weightage Total **100**