

COURSE CODE	COURSE TITLE	L	T	P	C
1153IT202	SQL FUNDAMENTALS	1	0	4	3

UNIT 1: BASIC CONCEPTS

Introduction to Databases – Database design-Process of database design - ER Model – ER diagram- Identifying entities, attributes and its relationships - Relational Algebra – Relational Calculus- Keys and Integrity Constraints

UNIT 2: DDL, DML AND JOINS

Data definition language-Data Manipulation Language- SQL Syntax Rules -Retrieving Data using the SQL SELECT Statement -The WHERE Statement- SQL Operators - SQL Data Types - Sub queries and Nested queries - LIKE and MIN- Joining Tables - Types of Join –Clauses – Conditions – Aliases.

UNIT 3: NORMALIZATION

Functional Dependencies - Normalization – First Normal Form, Second Normal Form and Third Normal Form –Advanced Normalization -Boyce/Codd Normal Form

UNIT 4: PL/SQL PROCEDURES

Control structure, Stored procedures, Triggers - View Definitions and Modifications, SQL Injections and SQL Hosting.

UNIT 5: FORM DESIGN AND DATABASE CONNECTIVITY

Forms and menu design (using visual basic) – database connectivity: JDBC, ODBC - Report generation- Case Studies.

Learning Resources

i. Text Book

1. SQL: The Complete Reference, 3 rd Edition, James R.Groff, Paul.N.Weinberg. Andrew J.Oppel, McGraw – Hill Education

ii. References

1. SQL QuickStart Guide: The Simplified Beginner's Guide To SQL , ClydeBank Technology .
2. SQL: The Ultimate Beginners Guide: Learn SQL Today, Steve Tale .
3. Learning SQL: Master SQL Fundamentals 2nd Edition by Alan Beauli.