

Course code	Course Name	L-T-P- Credits	Year of Introduction
IT333	Database Lab	0-0-3-1	2016
Prerequisite: CS208 Principles of database design			
Course Objectives <ul style="list-style-type: none"> To provide a hands on experience in database management concepts. To provide a strong formal foundation in database concepts, technology and practice to the students. To present SQL and procedural interfaces to SQL comprehensively. To declare and enforce integrity constraints on a database using a state-of-the-art RDBMS. 			
List of Exercises / Experiments (Minimum of 8 mandatory out of 10) <ol style="list-style-type: none"> Familiarization of creation of databases and SQL commands (DDL, DML and DCL). Suitable exercises to practice SQL commands may be given for Insert, Update, Delete etc Write SQL procedure for an application which uses exception handling. Write SQL procedure for an application with cursors. Write SQL for implementing Nested Queries. Write SQL for implementing Join Queries. Write a DBMS program to prepare reports for an application using functions. Write SQL block containing triggers. Write SQL block containing stored procedures. Develop a menu driven, GUI-based database application in any one of the domains such as Banking, Billing, Library management, Payroll, Insurance, Inventory, Healthcare etc. integrating all the features specified in the above exercises. 			
Class Project (Minimum one mandatory per group) <ol style="list-style-type: none"> Implementation of Library Management System, Payroll processing . Implementation of Hospital Management System Implementation of Student Management Systems Implementation of any Reservation Systems (Bus, Train, Railway etc...) 			
Expected Outcome <ul style="list-style-type: none"> The students will be able to design , understand , appreciate and effectively explain the underlying concepts of database technologies and thereby design and implement a database schema for a given problem-domain. 			
References <ol style="list-style-type: none"> Abraham Silberschatz, Henry F. Korth and S. Sudarshan, Database System Concepts, McGraw-Hill Education (Asia), Fifth Edition, 2006. Atul Kahate, Introduction to Database Management Systems, Pearson ... C. J. Date, A. Kannan and S. Swamynathan, An Introduction to Database Systems, Pearson Education, Eighth Edition, 2009. Patrick O'Neil and Elizabeth O'Neil, Database Principles, Programming and Performance, Harcourt Asia Pte. Ltd., First Edition, 2001. Peter Rob and Carlos Coronel, Database Systems Design, Implementation and Management, Thomson Learning-Course Technology, Seventh Edition, 2007. Ramez Elmasri , Shamkant B. Navathe, Fundamentals of Database Systems (7th Edition) , Pearson Education Ltd. Shio Kumar Singh, Database Systems Concepts, Designs and Application, Pearson Education, Second Edition, 2011. 			