Department of Computer Science and Engineering
National Institute of Technology Tiruchirappalli

1. Course Outline			
Course Title	Advanced Database Management Systems Lab		
Course Code	CS 610		
Programme & Department	M.Tech. - CSE	**No. of Credits**	2
Pre-requisites Course Code	CS606	**Faculty Name**	Dr. E. Sivasankar
E-mail	sivasankar@nitt.edu	**Telephone No.**	0431 - 2503213
Course Type	Lab course		
Session in Academic Year:	January – April Session (Even Semester) 2017		

2.Course Overview

This course mainly explores the internals of a Database Management Systems and its interface with front end tools for building real world applications.

3. Course Objectives

- To explore the features of a Database Management Systems
- To interface a database with front end tools.
- To understand the internals of a database system

4. Course Outcomes (CO)

- Gaining knowledge about the internals of a database system.
- Ability to use databases for building web applications.
- Ability to implement databases for real world problems

5. Course Outcomes (CO)	**Aligned Programme Outcome (PO)**							
	PO-1	**PO-2**	**PO-3**	**PO-4**	**PO-5**	**PO-6**	**PO-7**	**PO-8**
Gaining knowledge about the internals of a database system.	S	M	M	M	S	S	B	M
Ability to use databases for building web applications.	S	S	M	M	S	S	M	M
Ability to implement databases for real world problems	S	S	M	M	S	S	M	M

S = 0.6 M = 0.4 B = 0.0

6. Course Teaching and Learning Activities							
Sl. No	**Title**	**Type**		**Mode of delivery**			
		L	**T**	**C & T**	**PP T**	**VL/VC**	**DEMO**
1.	Working with Basic SQL commands. (DDL,DML,DCL)						√
2.	Working with Intermediate SQL. Commands(joins, views, aggregate functions)						√
3.	Working with Advanced SQL commands (Procedures, Functions and Triggers)						√
4.	Solving Database Design and Normalization Problems						√
5.	Accessing Databases from Programs using JDBC						√
6.	Building Web Applications using XML, PHP & MySQL						√
7.	Working with indexing and Query Processing						√
8.	Concurrency and Transactions						√
9.	Data Analytics (classification & prediction)						√
10.	Big Data Analytics using Hadoop						√

7. Course Assessment Methods				
Sl. No.	**Mode of Assessment**	**Week/Date**	**Duration**	**Marks**
1	Continuous assessment	Every week	3 hour	50
2	Test 1	7^{th} week	2 hour	25
4	Semester Examination	11^{th} week	2 hour	25
			Total	100

8. Essential Readings (Textbooks, Reference books, Websites, Journals, etc.)

Text Books:

1. A. Silberschatz, H. Korth, S. Sudarshan, Database system concepts, 5/e, McGraw Hill,2008.
2. R. Ramakrishnan, J. Gehrke, Database Management Systems, McGraw Hill, 2004

For Senate's Consideration

(Dr. E. SIVASANKAR)	(Dr. C. MALA)	(Dr. R.LEELA VELUSAMY)
Course Faculty	**Class Committee Chairperson**	**HOD / CSE**