



**Department of Computer Science and Engineering  
National Institute of Technology Tiruchirappalli**

1. Course Outline			
<b>Course Title</b>	Advanced Database Management Systems Lab		
<b>Course Code</b>	CS 610		
<b>Programme &amp; Department</b>	M.Tech. - CSE	<b>No. of Credits</b>	2
<b>Pre-requisites Course Code</b>	CS606	<b>Faculty Name</b>	Dr. E. Sivasankar
<b>E-mail</b>	sivasankar@nitt.edu	<b>Telephone No.</b>	0431 - 2503213
<b>Course Type</b>	Lab course		
<b>Session in Academic Year:</b>	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/V C	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

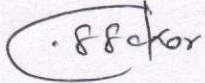
Sl. No.	Mode of Assessment	Week/Date	Duration	Marks
1	Continuous assessment	Every week	3 hour	50
2	Test 1	7 <sup>th</sup> week	2 hour	25
4	Semester Examination	11 <sup>th</sup> week	2 hour	25
Total				100

### 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)

Course Faculty



(Dr. C. MALA)

Class Committee Chairperson



(Dr. R. LEELA VELUSAMY)

HOD / CSE

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