Database Management System – IT615 (3-0-2-4)

Semester: Autumn 2017-18

Time Table:

Lectures:  
Tue and Thu @ 10:00 AM, Wed @ 8:00 AM (CEP 207)

Labs:  
will be communicated

Instructor:

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Office: FB-IV 4205

Course Objective:

This course teaches use of Database Management Systems (DBMS) to solve a wide range of information storage, management, and retrieval problems, in organizations ranging from large corporations to personal applications. The course combines the practical aspects of DBMS use with basic theory discussions for database design and administration. The problems with database design and implementations will be discussed. As part of the labs and assignments the students will design and implement a database for the given domain.

Text Books:


Evaluation Policy:

- Labs and Assignments: 25%
- In-Semester Exams (2): 20% + 20%
- End-Semester Exam: 35%

Attendance Policy:

- 0% to 30%: $\rightarrow$ total marks - 20
- 30% to 60%: $\rightarrow$ total marks - 10
- 60% to 70%: $\rightarrow$ total marks - 5
- 70% to 90%: $\rightarrow$ total marks - 0
- 90% to 100%: $\rightarrow$ total marks + 10

P.S. - Plagiarism is not acceptable and will attract F grade

Lecture Schedule:

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<tr>
<th>Lectures</th>
<th>Topic</th>
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<tbody>
<tr>
<td>1</td>
<td>Overview: basic definition, advantages, data storage, queries, transaction management, administration</td>
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<td>6</td>
<td>Data Models, E-R Model, Conceptual Design using E-R Model</td>
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<td>6</td>
<td>Relational Model: introduction, integrity constraints, Logical Database Design</td>
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<td><strong>1st In-Semester Exam</strong></td>
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<td>6</td>
<td>Query Languages: Relational Algebra, SQL</td>
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<td>8</td>
<td>Database Design &amp; Tuning: FD, Normal Forms, Decomposition, Normalization, Schema Refinement</td>
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<td>Physical Database Design</td>
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<td><strong>2nd In-Semester Exam</strong></td>
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<td>4</td>
<td>Transaction Management: ACID, Concurrency Control, Crash Recovery</td>
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<td>4</td>
<td>Database Administration and DBMS Tools</td>
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