



# The Islamia University of Bahawalpur Pakistan

## Bahawalnagar Campus

Department of Computer Sciences & IT

### Course Plan

<b>Instructor</b>	Ramna Sattar	<b>Email:</b> <a href="mailto:ramnasatar@gmail.com">ramnasatar@gmail.com</a>
<b>Course Title</b>	Distributed Database System	<b>Program</b> MCS- II(Evening)
<b>Course Code</b>	CSIT-21205	<b>Credit Hours</b> 03
<b>Session</b>	2019-2021(fall)	
<b>Prerequisites:</b> Database Systems		
<b><u>Course Objective:</u></b> The course aims to clearly describe the difference of Centralized database and distributed database and enable the students to design/model a distributed database.		
<b>Methods of Teaching</b> <ul style="list-style-type: none"><li>Assigned readings</li><li>Lab Manuals</li><li>Web-assisted instruction</li><li>Project</li></ul>		
<b>Resource Material</b>	<b>Books:</b> <ul style="list-style-type: none"><li>Principals of Distributed Database Systems by Ozsu Tamer.</li><li>Database Systems by Thomas Connolly.</li></ul> <b>Web Assistance:</b> <ul style="list-style-type: none"><li>Web resources will be recommended time to time</li></ul>	
<b>Office Help Days</b>	Monday-Friday	

### Sequences of Topics to be Covered in Lectures

Week	Topics to be Covered
Week 01	Introduction , DDBMS Types
Week 02	Relational Model , Relational keys
Week 03	Relational Algebra
Week 04	Relational Calculus , Normalization
Week 05	Distribution Transparency , Distributed DBMS Architecture
Week 06	<b>Mid Term</b>
Week 07	Design strategies , Data Replication

Week 08	Fragmentation , View management
Week 09	Distributed Data Security , Semantic integrity Control
Week 10	Distributed Transaction Management , Distributed Concurrency Control
Week 11	Serializability , Locked based algorithm, Time-stamp based algorithm
Week 12	Distributed Query Processing , Query Decomposition
Week 13	Query Optimization in Centralized , Query Optimization in Distributed
Week 14	Deadlock management , Reliability Protocols
Week 15	Failures in DDBMS , Distributed Database Recovery
Week 16	<b>Final Term</b>

**Student Evaluation criteria:**

Sessional	20
Mid	30
Final	50
<b>Total</b>	<b>100%</b>

**Student Responsibilities:**

Students must attend class. Failure to attend class may result in failure in the course. Students must also arrive on time and remain in class for the entire period. Cellular Phones and Beeper must be Turned off (Proper classroom decorum [behavior] adopts, Course outlines and calendars explain requirements and assignments, students are responsible for knowing what they say. Students are also responsible for doing all assigned work on time. Students may prepare Sketchbook for taking notes and for references.

**Instructor/Tutor**