


## **Academic Lesson Plan of Summer 2025**

<b>Department : CSE</b>	<b>Semester : 4th</b>	<b>Name of the teaching faculty: NALINIKANTA MOHAAPATRA</b>
<b>Subject: Database Management System</b>	<b>No.of days/per week class allotted</b>	<b>Semester from : 4th FEB 2025</b>
		<b>No. of weeks:15 weeks</b>
		<b>Topics to be covered:</b>
<b>1<sup>st</sup> week</b>	<b>1<sup>st</sup></b>	<b>BASIC CONCPETS OF DBMS</b>
	<b>2<sup>nd</sup></b>	<b>Purpose of database Systems</b>
	<b>3<sup>rd</sup></b>	<b>Explain Data abstraction</b>
	<b>4<sup>th</sup></b>	<b>Database users</b>
<b>2<sup>nd</sup> week</b>	<b>1<sup>st</sup></b>	<b>Data definition language</b>
	<b>2<sup>nd</sup></b>	<b>Continue</b>
	<b>3<sup>rd</sup></b>	<b>Data Dictionary</b>
	<b>4<sup>th</sup></b>	<b>DATA MODELS</b>
<b>3<sup>rd</sup> week</b>	<b>1<sup>st</sup></b>	<b>Data independence</b>
	<b>2<sup>nd</sup></b>	<b>Entity relationship models</b>
	<b>3<sup>rd</sup></b>	<b>Continue</b>
	<b>4<sup>th</sup></b>	<b>Entity sets and Relationship sets</b>
<b>4<sup>th</sup> week</b>	<b>1<sup>st</sup></b>	<b>Explain Attributes</b>
	<b>2<sup>nd</sup></b>	<b>Mapping constraints</b>
	<b>3<sup>rd</sup></b>	<b>E-R Diagram</b>
	<b>4<sup>th</sup></b>	<b>Relational model</b>
<b>5<sup>th</sup> week</b>	<b>1<sup>st</sup></b>	<b>Hierarchical model</b>
	<b>2<sup>nd</sup></b>	<b>Network model</b>
	<b>3<sup>rd</sup></b>	<b>RELATIONAL DATABASE</b>
	<b>4<sup>th</sup></b>	<b>Relational algebra</b>
<b>6<sup>th</sup> week</b>	<b>1<sup>st</sup></b>	<b>Different operators select, project, join , simple Examples</b>
	<b>2<sup>nd</sup></b>	<b>Different operators select, project, join , simple Examples</b>
	<b>3<sup>rd</sup></b>	<b>Different operators select, project, join , simple Examples</b>
	<b>4<sup>th</sup></b>	<b>Continue</b>
<b>7th week</b>	<b>1<sup>st</sup></b>	<b>Introduction of NORMALIZATION</b>
	<b>2<sup>nd</sup></b>	<b>Functional Dependencies</b>
	<b>3<sup>rd</sup></b>	<b>Continue</b>
	<b>4<sup>th</sup></b>	<b>Lossless join</b>
<b>8<sup>th</sup> week</b>	<b>1<sup>st</sup></b>	<b>Lossless join</b>
	<b>2<sup>nd</sup></b>	<b>Importance of normalization</b>
	<b>3<sup>rd</sup></b>	<b>First normal forms</b>
	<b>4<sup>th</sup></b>	<b>Second normal forms</b>
<b>9<sup>th</sup> week</b>	<b>1<sup>st</sup></b>	<b>third normal forms</b>
	<b>2<sup>nd</sup></b>	<b>Explain BCNF</b>
	<b>3<sup>rd</sup></b>	<b>Introduction of SQL</b>
	<b>4<sup>th</sup></b>	<b>Elementary idea of Query language</b>

<b>10<sup>th</sup> week</b>	<b>1<sup>st</sup></b>	<b>Queries in SQL</b>
	<b>2<sup>nd</sup></b>	<b>Simple queries to create in SQL</b>
	<b>3<sup>rd</sup></b>	<b>Simple queries to insert, alter in SQL</b>
	<b>4<sup>th</sup></b>	<b>Simple queries to update in SQL</b>
<b>11<sup>th</sup> week</b>	<b>1<sup>st</sup></b>	<b>Introduction of TRANSACTION PROCESSING CONCEPTS</b>
	<b>2<sup>nd</sup></b>	<b>Continue</b>
	<b>3<sup>rd</sup></b>	<b>Transaction &amp; system concept</b>
	<b>4<sup>th</sup></b>	<b>Continue</b>
<b>12<sup>th</sup> week</b>	<b>1<sup>st</sup></b>	<b>Desirable properties of transaction</b>
	<b>2<sup>nd</sup></b>	<b>Continue</b>
	<b>3<sup>rd</sup></b>	<b>Schedules and recoverability</b>
	<b>4<sup>th</sup></b>	<b>Continue</b>
<b>13<sup>th</sup> week</b>	<b>1<sup>st</sup></b>	<b>Introduction of CONCURRENCY CONTROL CONCEPTS</b>
	<b>2<sup>nd</sup></b>	<b>Continue</b>
	<b>3<sup>rd</sup></b>	<b>Locks, Live Lock, Dead Lock</b>
	<b>4<sup>th</sup></b>	<b>Continue</b>
<b>14<sup>th</sup> week</b>	<b>1<sup>st</sup></b>	<b>Serializability</b>
	<b>2<sup>nd</sup></b>	<b>Introduction of SECURITY AND INTEGRITY</b>
	<b>3<sup>rd</sup></b>	<b>Authorization and views</b>
	<b>4<sup>th</sup></b>	<b>Continue</b>
<b>15<sup>th</sup> week</b>	<b>1<sup>st</sup></b>	<b>Security constraints</b>
	<b>2<sup>nd</sup></b>	<b>Integrity Constraints</b>
	<b>3<sup>rd</sup></b>	<b>Discuss Encryption</b>
	<b>4<sup>th</sup></b>	<b>REVISION of all topics with Semister Question</b>

  
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