

<b>Course Name</b> : Data Modeling	<b>Course Code</b> : ITDB3108
<b>Pre Requisite</b> : ITSE2102 – Introduction to Software Engineering	<b>Credit Hours</b> : 3
<b>Passing Grade</b> : C	<b>Level</b> : Advanced Diploma
<b>No. of Theory Hrs</b> : 2	<b>No. of Practical Hrs</b> : 2
<b>Goal:</b> To prepare the students with essentials skills in developing data models for various organizations	
<b>Objectives:</b> Upon completion of this course, the students should be able to: <ol style="list-style-type: none"> <li>1. Explain the need and importance for data modeling</li> <li>2. Develop models of data from various perspectives</li> <li>3. Apply business rules in data modeling</li> <li>4. Perform Transformation and Normalization</li> <li>5. Reverse-engineer an existing database to create data models</li> </ol>	
<b>Outcomes</b>	<b>Methodologies</b>
Upon completion of this course, the students should be able to:	
1. Discuss the data modeling concepts and its importance	Theory
2. Explain the components of Data modeling	Theory
3. Describe data modeling approaches and techniques	Theory
4. Build data model for business requirements	Practical
5. Produce Physical data model from logical data model	Practical
6. Apply normalization up to the Sixth Normal Form	Practical
7. Construct Dimensional Modeling	Practical
8. Create data model based on reverse engineering	Practical
9. Illustrate the use of Strategic Modeling, Business Planning, Tactical Modeling, and Activity Modeling in Project development	Practical
<b>Software &amp; Hardware Tools:</b> Microsoft Visio	
<b>Text Book:</b> 1) Graeme Simsion,& Graham Witt, Data modeling Essentials: Third Edition, ISBN: ISBN-10: 0126445516 & ISBN-13: 978-0126445510	
<b>Reference Book:</b> 1) Micheal C. Reingruber, Data Modeling Handbook, Wiley , ISBN-10: 0471052906	

