



**CHOICE BASED CREDIT SYSTEM**  
**Credit and Semester System Syllabus**

**BACHELOR OF SCIENCE - INFORMATION TECHNOLOGY (B.Sc.(IT))**

**Semester-V (TY)**

<b>Course No.</b>	<b>Course Type</b>	<b>Subject</b>	<b>Credit</b>
B.Sc.(IT)-EC-501	ELECTIVE	IT PROJECT MANAGEMENT	02
B.Sc.(IT)-FC-502	FOUNDATION	ENGLISH	02
B.Sc.(IT)-CC-503	CORE	WEB PROGRAMMING-I Using PHP	03
B.Sc.(IT)-CC-504	CORE	ADVANCE DATABASE CONCEPT AND TOOLS	03
B.Sc.(IT)-CC-505	CORE	SOFTWARE ENGINEERING	03
B.Sc.(IT)-CC-506	CORE	MANAGEMENT INFORMATION SYSTEM	03
B.Sc.(IT)-CC-507	CORE	PRACTICAL (BASED ON 503 AND 504)	12
Total			28



**MAHARAJA KRISHNAKUMARSINHJI BHAVNAGAR UNIVERSITY**  
(With effect from Academic Year: 2019-20)

<b>B.SC IT</b> <b>Course: IT PROJECT MANAGEMENT</b> <b>Course No: B.SC IT-EC-501</b>			
<b>Semester: 05</b> <b>Type of Course : Core Course</b>			
<b>Marking Scheme:</b> External Examination: 70 + Internal Evaluation: 30 = 100 <b>Credits: 02</b>			
<b>Theory Sessions per Week: 02</b>		<b>Teaching Hours: 30 Hours</b>	
<b>Unit</b>	<b>Detailed Syllabus</b>	<b>Teaching Hours</b>	<b>Marks/Weight</b>
<b>Unit-1</b>	<b>Introduction AND IT Project</b>	<b>8</b>	<b>18</b>
	- Definition of the project - Project specification and parameters. - Goals of IT Project Management. - Project management life cycle - Introduction to types of Project. - Overview of Project Planning. - Project Analysis. - Software Estimation.		
<b>Unit-2</b>	<b>Activity Planning</b>	<b>8</b>	<b>18</b>
	- Project Management Activity. - Project Coast Estimation. - Project Planning. - Project Scheduling.		
<b>Unit-3</b>	<b>Risk Management</b>	<b>7</b>	<b>17</b>
	- Risk Management: Resource Allocation –Monitoring and control. - Team Management. - Role and Responsibilities in Project Team - Project Tracking.		
<b>Unit-4</b>	<b>Case Study</b>	<b>7</b>	<b>17</b>
	- Institute Management System, Inventory Management System, Hospital Management System, Hotel Management System, Etc.....		
<b>Reference Books</b>			
1. John J. Rakos, “Software Project Management”, 1998, Prentice Hall 2. Walker Royce, “Software Project Management”, 2001, Pearson Education. 3. Roger S. Pressman, “Software Engineering”, 2001, McGraw Hill. 4. Jack T. Marchewka, Information Technology Project Management,4th Edition. 5. Mike Cotterell, Bob Hughes- Software Project Management- McGraw Hill 5th Edition.			



**MAHARAJA KRISHNAKUMARSINHJI BHAVNAGAR UNIVERSITY**  
**(With effect from Academic Year: 2019-20)**

<b>B.Sc IT</b>	<b>Course: Web Programming – I Using PHP</b>	<b>Course No: B.Sc IT-CC-503</b>	
<b>Semester: 05</b>	<b>Type of Course : Core Course</b>		
<b>Marking Scheme: External Examination: 70 + Internal Evaluation: 30 = 100</b>		<b>Credits: 03</b>	
<b>Theory Sessions per Week: 03</b>		<b>Teaching Hours: 45 Hours</b>	
<b>Unit</b>	<b>Detailed Syllabus</b>	<b>Teaching Hours</b>	<b>Marks/Weight</b>
<b>Unit-1</b>	<b>Introduction To PHP and Basic PHP</b>	<b>12</b>	<b>18</b>
	<ul style="list-style-type: none"><li>• Fundamental of APACHE Server.</li><li>• Concept of Wamp &amp; Xampp Server.</li><li>• History &amp; Versions of PHP</li><li>• Features of PHP</li><li>• Introduction to PHP Programming.</li><li>• Introduction to PHP, PHP Variables</li><li>• Operators in PHP</li><li>• Conditional Statements &amp; looping Statements in PHP</li><li>• Array , Types of Array</li><li>• Functions – UDF and Built in Functions.</li></ul>		
<b>Unit-2</b>	<b>Introduction To Java Script</b>	<b>11</b>	<b>18</b>
	<ul style="list-style-type: none"><li>• Variable and Data Type Types of Operators Conditional Statements, looping Statements</li><li>• Array, Functions ,Events ,Message Box ,Objects Based Programming</li><li>• Validation of form using JavaScript ,Different types of effects in designing using JavaScript</li></ul>		
<b>Unit-3</b>	<b>Form Handling</b>	<b>11</b>	<b>17</b>
	<ul style="list-style-type: none"><li>• Handling form with GET &amp; POST, Cookies, Session, Server variable</li><li>• Regular Expressions in PHP, Functions used in Regular Expressions, Symbols used in Regular Expressions</li><li>• Exception Handling</li><li>• Object Oriented concept in PHP</li></ul>		
<b>Unit-4</b>	<b>Interaction between PHP &amp; MySQL</b>	<b>11</b>	<b>17</b>
	<ul style="list-style-type: none"><li>• PHP-MySQL Architecture</li><li>• PHP API</li><li>• Creating &amp; Connecting Database using Wamp Server</li><li>• Executing DML Commands.</li></ul>		
<b>Reference Books</b>			
1. Ivan Bayross, Sharanam Shah: PHP 5.1 For Beginners, Shroff Publishers & Distributors (SPD)			
2. Janet Valade: PHP5 & MYSQL Projects, Wiley Dreamtech			
3. Dave W. Mercer: Beginning PHP5, Wiley India Edition			
4. Steven Holzner: The Complete Reference PHP, Tata McGRAW – HiLL, New Delhi			





**Reference Books**

1. Ivan Bayross: SQL/PLSQL, The Programming Language of ORACLE, BPB Publication
2. Learn Oracle 8i. By Jose A. Ramalho. Published by: BPB
3. SQL in 21-Days – Techmedia
4. Bipin C. Desai – An Introduction to Database Systems
5. Avi Silberschatz, Henry F. Korth, S. Sudarshan – Database System Concepts, McGraw-Hill
6. Raghu Ramakrishnan, Johannes Gehrke – Database Management System, Tata McGraw Hill



**MAHARAJA KRISHNAKUMARSINHJI BHAVNAGAR UNIVERSITY**  
**(With effect from Academic Year: 2019-20)**

<b>B.Sc IT</b>		<b>Course: Software Engineering</b>	<b>Course No: B.Sc IT-CC-505</b>	
Semester: <b>05</b>		Type of Course : Core Course		
Marking Scheme: External Examination: 70 + Internal Evaluation: 30 = 100		Credits: 03		
Theory Sessions per Week: 03		Teaching Hours: 45 Hours		
Unit	Detailed Syllabus	Teaching Hours	Marks/Weight	
<b>Unit-1</b>	<b>Introduction and Software Requirements Analysis &amp; Specifications</b>	<b>12</b>	<b>18</b>	
	<ul style="list-style-type: none"><li>• Introduction to Software Engineering &amp; Approaches of Software Engineer</li><li>• Software(S/W) &amp; Nature of S/W</li><li>• Software Development Process Models – Water Fall Model, Prototyping, Iterative Enhancement, Spiral Model</li><li>• Software Requirements – Need For SRS, Requirement Process</li><li>• Role of SRS</li><li>• Problem Analysis – Informal Approach, Structured Analysis, Object Oriented Modeling</li><li>• Requirement Specifications</li><li>• Validation &amp; Verification</li></ul>			
<b>Unit-2</b>	<b>Planning &amp; Design of Software.</b>	<b>11</b>	<b>18</b>	
	<ul style="list-style-type: none"><li>• Team Structure, Quality assurance plan</li><li>• Risk Management, System Design principles, Module level concepts, Coupling &amp; Cohesion</li><li>• Design Methodology, Structure Chart</li><li>• Functional approach vs. Object oriented approach.</li></ul>			
<b>Unit-3</b>	<b>Coding &amp; Testing</b>	<b>11</b>	<b>17</b>	
	<ul style="list-style-type: none"><li>• Programming Practice, Testing Fundamentals</li><li>• Top Down &amp; Bottom Up Approach for Coding &amp; Testing</li><li>• Testing Fundamentals – Error, Fault, Failure</li><li>• Levels of Testing</li><li>• Test cases &amp; Test criteria</li><li>• Types of testing – Black Box, White Box &amp; Grey Box</li></ul>			
<b>Unit-4</b>	<b>Case Study</b>	<b>11</b>	<b>17</b>	
	<ul style="list-style-type: none"><li>• Case study<ol style="list-style-type: none"><li>1. Student Management System</li><li>2. Hotel Management System</li><li>3. Airline Reservation System</li><li>4. Inventory Management System</li><li>5. Payroll Management System.</li></ol></li></ul>			
<b>Reference Books</b>				
<ol style="list-style-type: none"><li>1. Pankaj Jalote: An Integrated Approach to Software Engineering, Narosa Publication</li><li>2. Roger Pressman: Software Engineering, McGraw-Hill Publication</li></ol>				



**MAHARAJA KRISHNAKUMARSINHJI BHAVNAGAR UNIVERSITY**  
**(With effect from Academic Year: 2019-20)**

<b>B.Sc IT</b> <b>Course: Management Information System</b> <b>Course No: B.Sc IT-CC-506</b>			
<b>Semester: 05</b>		<b>Type of Course : Core Course</b>	
<b>Marking Scheme: External Examination: 70 + Internal Evaluation: 30 = 100</b>		<b>Credits: 03</b>	
<b>Theory Sessions per Week: 03</b>		<b>Teaching Hours: 45 Hours</b>	
<b>Unit</b>	<b>Detailed Syllabus</b>	<b>Teaching Hours</b>	<b>Marks/Weight</b>
<b>Unit-1</b>	<b>Introduction to Management Information Systems and The Structure of MIS</b>	<b>12</b>	<b>18</b>
	<ul style="list-style-type: none"><li>• MIS Concepts –EIS, DSS, MRS, TPS and OIS</li><li>• Concept of Organization, Management and Information</li><li>• Information – Meaning, Uses and Cost of Information</li><li>• The need for Information system</li><li>• Types of organizational Information: TPS, MRS, DSS, EIS, OIS</li><li>• Characteristics of MRS</li><li>• Reports by MRS – Report’s forms: Scheduled(Periodic) Report, Exception Report, Demand Report</li><li>• Characteristics of DSS</li><li>• Characteristics of EIS.</li></ul>		
<b>Unit-2</b>	<b>Information needs for strategic planning</b>	<b>11</b>	<b>18</b>
	<ul style="list-style-type: none"><li>• Concept of value streams and strategy</li><li>• Characteristics of information – cost, accessibility, reliability, security</li><li>• Strategies for competitive advantages – differentiation, cost leadership, focus.</li><li>• Information usage for strategic advantage</li><li>• International strategy</li></ul>		
<b>Unit-3</b>	<b>Introduction of Enterprise Resource Planning (ERP)</b>	<b>11</b>	<b>17</b>
	<ul style="list-style-type: none"><li>• Concept of Enterprise Management System (EMS) and ERP</li><li>• ERP Architecture and EMS model</li><li>• ERP Basic Features</li><li>• Characteristics of ERP solutions and benefits of ERP</li><li>• ERP solution evaluation</li></ul>		
<b>Unit-4</b>	<b>Development of MIS plan and Quality and Privacy issues</b>	<b>11</b>	<b>17</b>
	<ul style="list-style-type: none"><li>• Contents of MIS plan</li><li>• MIS plan is linked to the business plan</li><li>• Classification of information – organizational, functional, knowledge, decision support and operational</li><li>• Management of Quality in MIS</li></ul>		
<b>Reference Books</b>			
<ol style="list-style-type: none"><li>1. Management Information System By K.C. Laudon. and J.P. Laudon. PHI</li><li>2. Management Information System By V.S.Bagad</li><li>3. Management Information System By Sadagopan</li></ol>			



**MAHARAJA KRISHNAKUMARSINHJI BHAVNAGAR UNIVERSITY**  
**(With effect from Academic Year: 2019-20)**

<b>B.Sc IT</b> <b>Course: Practical</b> <b>Course No: B.Sc IT-CC-507</b>			
<b>Semester: 05</b> <b>Type of Course: Core Course</b>			
<b>Marking Scheme: External Examination: 100 + Internal Evaluation: 00 = 100 Marks</b>			
<b>Credits: 12</b> <b>Practical Sessions per Week: 12</b> <b>Teaching Hours:180Hours</b>			
<b>Unit</b>	<b>Detailed Syllabus</b>	<b>Teaching Hours</b>	<b>Marks/Weight</b>
Unit-1	Practical Based on 503	<b>90</b>	<b>50</b>
Unit-2	Practical Based on 504	<b>90</b>	<b>50</b>