



### **Structure for M.Sc. IT – CBCS Programme**

#### **Semester-II**

COURSE NO.	COURSE TYPE	SUBJECT	CREDIT
M.Sc.IT 201	CORE	Web Application Development Using PHP	06
M.Sc.IT 202	CORE	Mobile Application Development Using Android	06
M.Sc.IT 203	CORE	Linux Operating System And Shell Programming	06
M.Sc.IT 204	CORE	Practical Based On 201, 202 and 203	12
TOTAL			30

#### **Internal Continuous Evaluation:**

1. There will be Internal Continuous Evaluation in Theory papers of Core Course.
2. There will be 30 marks for Assignments in Course No: M.Sc.IT-201, M.Sc.IT -202, M.Sc.IT -203



M.Sc IT		<b>Course: Web Application Development Using PHP</b> Course No: M.Sc IT-201	
Semester: 02		Type of Course : Core Course	
Marking Scheme: External Examination: 70 + Internal Examination: 30 = 100			
Credits: 06		Teaching Hours Per Week: 06	
Unit	Detailed Syllabus	Teaching Hours	Marks/Weight
<b>Unit-1</b>	Introduction	<b>18</b>	<b>14</b>
	Fundamental of APACHE Server. Concept of Wamp & Xampp Server. History & Versions of PHP Features of PHP Introduction to PHP Programming.		
<b>Unit-2</b>	Introduction to Java Script	<b>18</b>	<b>14</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>	Basic PHP	<b>18</b>	<b>14</b>
	<ul style="list-style-type: none"><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-4</b>	Form Handling	<b>18</b>	<b>14</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-5</b>	<b>Interaction between PHP &amp; MySQL</b>	<b>18</b>	<b>14</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><li>• Overview of CMS-WordPress</li></ul>		
<b>Reference Books</b>			
4. Ivan Bayross,Sharanam Shah:PHP 5.1 For Beginners,Sh off Publishers & Distributors(SPD)			
5. Janet Valade: PHP5 & MYSQL Projects,Wiley Dreamtech			
6. Dave W. Mercer: Beginning PHP5,Wiley India Edition			
7. Steven Holzer:The Complete Reference PHP,Tata McGRAW-HiLL,New Delhi.			



M.Sc IT <b>Course: Mobile Application Development Using Android</b> Course No: M.Sc IT-202			
Semester: 02		Type of Course : Core Course	
Marking Scheme: External Examination: 70 + Internal Examination: 30 = 100			
Credits: 06		Teaching Hours Per Week: 06	
Unit	Detailed Syllabus	Teaching Hours	Marks/Weight
<b>Unit-1</b>	<b>Introduction to Android</b>	<b>18</b>	<b>14</b>
	<ul style="list-style-type: none"><li>• History of Mobile Software Development</li><li>• The Android Platform and Android SDK</li><li>• Anatomy of an Android applications</li><li>• Android terminologies</li></ul>		
<b>Unit-2</b>	<b>Android Application Design Essential</b>	<b>18</b>	<b>14</b>
	<ul style="list-style-type: none"><li>• Application Context, Activities, Services, Intents</li><li>• Component of Android Manifest File and Application Resources</li><li>• Receiving and Broadcasting Intents</li><li>• Configuring android manifest file, registering activities and other application components, working with permissions, working with resources.</li></ul>		
<b>Unit-3</b>	<b>Android User Interface Design Essentials</b>	<b>18</b>	<b>14</b>
	<ul style="list-style-type: none"><li>• Introducing android views and layouts, displaying text with Text-view,</li><li>• Retrieving data from users, using buttons, check boxes and radio groups,</li><li>• Getting dates and times from users, using list view to display data to Users, adjusting progress with Seek bar, handling user events, working with dialogs, working with styles and themes.</li></ul>		
<b>Unit-4</b>	<b>Animation and Content Provider</b>	<b>18</b>	<b>14</b>
	<ul style="list-style-type: none"><li>• Introduction of animations and types in Android.</li><li>• Drawing and Working with Animation</li><li>• Working with bitmaps</li><li>• Sharing Data Between Applications with Content Providers</li></ul>		
<b>Unit-5</b>	<b>Using Common Android APIs</b>	<b>18</b>	<b>14</b>
	<ul style="list-style-type: none"><li>• Managing data using SQLite</li><li>• Using Android Networking APIs</li><li>• Using Android Web APIs using web view</li><li>• Using Android Telephony APIs using SMS, making and receiving phone call</li></ul>		
<b>Reference Books</b>			
<ol style="list-style-type: none"><li>1. Android Wireless Application Development By Lauren Darcey and Shane Conder, Pearson Education, 2<sup>nd</sup> ed. (2011)</li><li>2. Beginning Android Application Development By Wei-Meng Lee, Wrox Publication</li><li>3. Mark L Murphy, "Beginning Android", Wiley India Pvt Ltd(2009)</li></ol>			



M.Sc IT <b>Course: Linux Operating system and Shell Programming</b> Course No: M.Sc IT-203			
Semester: 02		Type of Course : Core Course	
Marking Scheme: External Examination: 70 + Internal Examination: 30 = 100			
Credits: 06		Teaching Hours Per Week: 06	
Unit	Detailed Syllabus	Teaching Hours	Marks/Weight
<b>Unit-1</b>	<b>Introduction</b>	<b>18</b>	<b>14</b>
	<ul style="list-style-type: none"><li>• History of Unix Operating System Definition of Kernel, Shell, File, Process, System Calls.</li><li>• Linux Operating System, Features of Unix and Linux Operating System,</li><li>• Concept of Open source software, Application area of Linux Operating System</li><li>• Various Linux Flavors</li><li>• Desktop Environment : (a) X Window Basics (b) KDE Basics (c) GNOME Basics</li><li>• Terms and condition of Copying, Distribution, and Modifications (Linux &amp; GNU)</li><li>• Advantages and Disadvantages of Linux</li></ul>		
<b>Unit-2</b>	<b>File Structure and Linux Shells.</b>	<b>18</b>	<b>14</b>
	<ul style="list-style-type: none"><li>• Understanding File system hierarchy standard.</li><li>• Directory Commands</li><li>• File and Directory commands:</li><li>• Understanding Job (process).</li><li>• Process Commands:</li><li>• User commands:</li><li>• Misc Commands</li></ul>		
<b>Unit-3</b>	<b>User Management</b>	<b>18</b>	<b>14</b>
	<ul style="list-style-type: none"><li>• GUI user management tools: User admin and KUser</li><li>• Password file, Managing user environment</li><li>• Adding and removing users with useradd, usermod and userdel</li><li>• Managing groups, Controlling access to directories and file using chmod</li></ul>		
<b>Unit-4</b>	<b>Networking concepts &amp; Server configuration</b>	<b>18</b>	<b>14</b>
	<ul style="list-style-type: none"><li>• Basics of network system, Basics of TCP/IP Networking, IP address, IP address</li><li>• class and mask, port number, DNS, NFS server configuration</li><li>• Telnet and FTP server fundamentals</li><li>• Basics of Samba server: Installation and configuration</li></ul>		
<b>Unit-5</b>	<b>Bash Shell Programming</b>	<b>18</b>	<b>14</b>
	<ul style="list-style-type: none"><li>• Introduction to Vi Editors</li><li>• Introduction to Shell : Korn, Bash, and C Shell with their difference</li><li>• Variables in shell, how to print or access values in shell, echo command.</li><li>• Shell arithmetic, commands and command line arguments, I/O redirection</li><li>• Structured language construct: if, else, else - if, case statement, loops in shell,</li></ul>		



**MAHARAJA KRISHNAKUMARSINHJI BHAVNAGAR UNIVERSITY**  
**NAAC Accreditation Grade "B"**  
**(With effect from Academic Year: 2018-19)**

	• Arrays, Command line argument.		
<b>Reference Books</b> Richard Petersen: The complete reference – 6 <sup>th</sup> edition – McGraw Hill 2. Sumitabha Das: Concepts and Application of UNIX 4 <sup>th</sup> edition – Tata McGraw Hill 3. Peter Nortons's: Complete Guide to Linux, Techmedia 4. Yashwant Kanitkar: Unix Shell Programing, BPB Publication			

M.Sc IT	<b>Course: Practical Based on 202 and 203</b>	Course No: M.Sc IT-204	
Semester: 02	Type of Course : Core Course		
Marking Scheme: External Examination: 100			
Credits: 12	Teaching Hours Per Week: 12		
	<b>Detailed Syllabus</b>	<b>Teaching Hours</b>	<b>Marks/Weight</b>
<b>1</b>	<b>Paper 201: Web Application Development Using PHP</b>	<b>60</b>	<b>40</b>
<b>2</b>	<b>Paper 202: Mobile Application Development Using Android</b>	<b>60</b>	<b>30</b>
<b>3</b>	<b>Paper 203: Linux Operating system and Shell Programming</b>	<b>60</b>	<b>30</b>