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

Semester-VI (TY)

Course No.	Course Type	Subject	Credit
B.Sc.(IT)-EC-601	ELECTIVE	Multimedia & Application	02
B.Sc.(IT)-FC-602	FOUNDATION	ENGLISH	02
B.Sc.(IT)-CC-603	CORE	WEB PROGRAMMING-II Using ASP.NET	03
B.Sc.(IT)-CC-604	CORE	OOP USING JAVA	03
B.Sc.(IT)-CC-605	CORE	DATA WARE HOUSE AND DATA MINING	03
B.Sc.(IT)-CC-606	CORE	MINI PROJECT	03
B.Sc.(IT)-CC-607	CORE	PRACTICAL (BASED ON 603 AND 604)	12
Total			**28**

B.Sc IT. **Course: Multimedia & Application** **Course No: B.SC IT-EC-601**
Semester: 06 **Type of Course :** Core Course
Marking Scheme: External Examination: 70 + Internal Evaluation: 30 = 100 **Credits:** 02
Theory Sessions per Week: 02 **Teaching Hours:** 30 Hours

Unit	Detailed Syllabus	Teaching Hours	Marks/ Weight
Unit-1	**Multimedia- the Concept.**	**8**	**18**
	Introduction Multimedia Definition and Main properties of multimedia system Combination of media Use of multimedia in Education, Entertainment, Advertisement, etc.		
Unit-2	**Components of Multimedia-1 (Text and Graphics)**	**8**	**18**
	Text Images and File Format Graphics and File Format - Basic concept, Digital image representation		
Unit-3	**Components of Multimedia-2**	**7**	**17**
	Digital Audio - Basic sound concept, representation of sound, audio formats Basic concept of Video Signal representation and Computer video format - Basic concept of animation and languages		
Unit-4	**Data Compression AND Multimedia Applications**	**7**	**17**
	Compression technique JPEG MPEG Storage Media Application of multimedia General Design Issues Planning of multimedia Design of Multimedia		

Reference Books

1. Multimedia: Computing, Communications and Application by Ralf Steinmetz and Klara Nahrshedt (Pearson Education Asia)

B.Sc IT **Course: Web Programming – II Using ASP.NET** **Course No: B.Sc IT-CC-603**
Semester: **06** 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
Unit-1	**Introduction and Basic Controls**	**12**	**18**
	• Introduction of IDE. • Introduction of web forms & Page event life cycle. • Global application class & web.config file. • Advantages and features of asp.net. • State management using view state, query string, session and cookies. • Label, Button and Textbox. • List Controls:Dropdownlist, listbox, checkbox list, radiobutton list,BulletedList. • Radio button, checkbox. • File upload and Image control. • Hyperlink, table, panel and wizard		
Unit-2	**Advance controls**	**11**	**18**
	• Navigation controls using menu, treeview and sitemap path. • Validation Controls • Ad Rotator • Login Controls. • Master Page, Theme and CSS.		
Unit-3	**Working with Database**	**11**	**17**
	• ADO.NET architecture. • Introduction of Server Explorer and its Features. • Create database using sql server express and access with server explorer. • Connectivity using code and sql data source. • Data controls using grid view, form view, details view and data list control.		
Unit-4	**AJAX & Web services**	**11**	**17**
	• Introduction of AJAX : History, Advantages, Application • AJAX architecture. • AJAX basic controls- ScriptManager, ScriptManagerProxy, UpdatePanel, UpdateProgress and timer. • Introduction of web services. • Create and deploy web services.		

Reference Books

1. Asp.net black book published by dreamtech press
2. Asp.net unleashed by stephen walther
3. Asp.net Professional Edition by Wrox Publication

B.Sc IT **Course: OOP Using JAVA** **Course No: B.Sc IT-CC-604**

Semester: **06** 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
Unit-1	**Basic of JAVA and Object - Oriented Programming Technique**	**12**	**18**
	• Basic concept of OOP Approach-Class and object, Abstraction and Encapsulation, Inheritance and Polymorphism. • Overview of Netbeans and eclipse editor. • Java Language Basics- Byte code, Buzz Words, JVM • Data types, Operators, Control & Looping Statement, Array, and command line argument • Class and Objects, Methods • Constructor, Garbage Collection • Inheritance • Polymorphism		
Unit-2	**Package, Interface and Exception Handling**	**11**	**18**
	• Packages • Interfaces • Exception Handling		
Unit-3	**Multithreading**	**11**	**17**
	• Introduction, Main Thread , Thread Lifecycle • Thread Creation, isAlive(), join() methods • Thread Priority • Synchronization		
Unit-4	**I/O In JAVA, String & Characters Methods**	**11**	**17**
	• Introduction to I/O. • Stream Classes – ByteStream & CharacterStream. • Reading and Writing into file , Reading and writing from Console. • String Class-operation, methods. • Serialization.		

Reference Books

1. Compete Reference Java By Herbert Schildt Publisher: TMH
2. Programming in JAVA By E-Balaguruswami

B.Sc IT **Course: Data Warehouse & Data Mining** **Course No: B.Sc IT-CC-605**

Semester: **06** 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
UNIT-1	**INTRODUCTION OF DATAWAREHOUSE AND DATA MART**	**12**	**18**
	• Operational and Informational systems. • Concept of Data warehouse ,Characteristics of Data Warehouse • DBMS vs. data warehouse • Data warehouse system architecture (Two and Three-Tiered) • Concept of Data Mart , Usage of Data Mart • Security in Data Mart • Data warehouse and Data Mart		
UNIT-2	**ONLINE ANALYTYCAL PROCESSING**	**11**	**18**
	• OLTP AND OLAP SYSTEM • OLTP VS OLAP • TYPES OF OLAP: ROLAP, MOLAP,HOLAP • Comparison of ROLAP,MOLAP,HOLAP		
UNIT-3	**ETL and Data Mining**	**11**	**17**
	• Concept of ETL(Extracton,Transformation and Loading of Data) • Comparison and contradiction of various ETL tools • Data Mining-Definition and Functionalities • Classification of DM Systems • DM task primitives • Integration of a Data Mining system with a Database or a Data Warehouse • Issues in DM • KDD Process		
UNIT-4	**Data Mining Techniques**	**11**	**17**
	• Data Mining techniques • Data Processing (Data Cleaning, Integration and Transformation, Reduction) • Data mining Primitives and DMQL • Designing GUI based on a DMQL • Architecture of Data Mining System • Mining Text Data • Mining Spatial Databases • Mining WWW • Mining sequence Data: Time-Series, Symbolic Sequences, and Biological Sequences • Mining graphs and Network • Data Mining application and trends		

Reference Books

1. Data Mining – Concepts & Techniques; Jiawei Han & Micheline Kamber – First Indian Reprint 2002,
2. Morgan Kaufmann publication.
3. Data Warehousing in the Real World; Sam Anahory & Dennis Murray; 1997, Pearson
4. Data Mining Techniques; Arun Pujar; 2001, University Press; Hyderbad.
5. Data Mining; Pieter Adriaans & Dolf Zantinge; 1997, Pearson
6. Data Warehousing, Data Miniing and OLTP; Alex Berson, 1997, McGraw Hill.
7. Data warehousing System; Mallach; 2000, McGraw

B.Sc IT	Course: **Project Work**	Course No: **B.Sc IT-CC – 606**
Semester: **06**	Type of Course : Core Course	
Marking Scheme: External Examination: 70 + Internal Evaluation: 30 = 100 Credits: 03		

Detailed Syllabus

The objectives of the project is to help the student develop the ability to apply theoretical and practical tools/techniques to solve real life problems related to industry, academic institutions and small business solution.

Internal Evaluation scheme: 30 Marks

Submission of project proposal

Progress Report every month (3 Progress Report)

Term End Evaluation 70 Marks:

PROJECT REPORT EVALUATION – 30 MARKS

ACTUAL PROJECT EVALUATION AND VIVA – 40 MARKS

Preparing project report

Student has to prepare project report according to given suggestive structure of project report.

Title page

Certificate of work

Acknowledgment

Table of content

Table of Figures

Chapter-1 (Introduction)

- Background, Objective, purpose , scope , applicability

Chapter-2 (Requirement And Analysis)

- Problem definition, Requirement specification, Hardware Software Requirement.
- Planning and Scheduling

Chapter-3 System design

- Over all System design using designing Tools
- Data Dictionary
- Input /Output Design

Chapter -4 Testing and implementation

- Testing Approach used
- Test cases
- Implementation Approaches

Chapter-5

- Conclusion
- Limitation of system
- Future Scope of system
- Bibliography

Student have to prepare 2 – copies of report , 1st copy has to submit in college for evaluation (must be in hard binding) and 2nd copy for personal reference.

B.Sc IT **Course: Practical** **Course No: B.Sc IT-CC-607**
Semester: 06 Type of Course: Core Course
Marking Scheme: External Examination: 100 + Internal Evaluation: 00 = 100 Marks
Credits: 12 **Practical Sessions per Week: 12 Teaching Hours: 180 Hours**

Unit	Detailed Syllabus	Teaching Hours	Marks/ Weight
Unit-1	Practical Based on 603	90	50
Unit-2	Practical Based on 604	90	50