SCHEME OF MARKS [BA/BCOM/BSC]-CA-I, II, III YEAR

Papers	Duration	Internal				Theory	Total		Practical		Grand Total
	First Year	**Three Months**	**Six Months**	**Total**							
				Max	**Min**		**Max**	**Min**	**Max**	**Min**	
I	**Fundamentals of Computer and C programming**	**10**	**10**	**20**	**07**	**40**	**80**	**28**	**50**	**17**	**150**
II	**Office Automation and Desktop publishing**					**40**					
	Second Year			**Max**	**Min**		**Max**	**Min**	**Max**	**Min**	
I	**Object Oriented Programming (C++) & Conceptual Operating System**	**10**	**10**	**20**	**07**	**40**	**80**	**28**	**50**	**17**	**150**
II	**Computer Networks & Relational Database Management System**					**40**					
	Third Year			**Max**	**Min**		**Max**	**Min**	**Max**	**Min**	
I	**BA/BSC- Webpage Designing using .NET BCOM- Webpage Designing using PHP**	**10**	**10**	**20**	**07**	**40**	**80**	**28**	**50**	**17**	**150**
II	**Cyber Security & Software Engineering**					**40**					

Learning outcomes of B.Sc / BA / BCom Computer Application

PLO-1. Demonstrate the ability to apply application software in an office environment.

PLO-2. Demonstrate basic level of competency in programming and logic skills.

PLO-3. Utilize web technologies.

PLO-4. Demonstrate a basic understanding of computer hardware and software.

PLO-5. Demonstrate problem-solving skills.

PLO-6. Apply logical skills to programming in a variety of languages.

PLO-7. Describe the features and functions of the categories of application software.

PLO-8. Demonstrate desk top publishing

PLO-9. Basic understanding of networking, cyber security, data base and software engineering.

B.Sc./BA – III YEAR

Subject- COMPUTER APPLICATION

Paper – I Web Technology using ASP.NET

Course Objective:

- Set up a programming environment for ASP.NET programs.
- Configure an ASP.NET application.
- Creating ASP.NET applications using standard .NET controls.
- Develop a data driven Web Application.
- Connecting to data sources and managing them

Course Outcome:

Upon completion of this course, the student will be able to apply technical knowledge and perform specific technical skills, including:

- Design web applications using ASP.NET
- Use ASP.NET controls in web applications.
- Debug and deploy ASP.NET web applications
- Create database driven ASP.NET web applications.

UNIT I

Introduction to Web Development: Websites, Client- Server Architechture, Types of Websites: Static & Dynamic, Web Browsers, **Scripting languages:** Client side scripting, Server side scripting.**Static Websites using HTML:** Introduction to HTML –HTML tags, List, Tables, frames- Form Controls.

UNIT -II

Introduction to Style Sheets: Stylesheet, Types of stylesheets: Internal, External, Embedded, Style sheet properties – Font, Text, List, background and their Display properties**. Introduction to Javascript** - Javascript Syntax – Data type -Variable - Array - Operator and Expression   - Looping Constructor - Function -Dialog box, user defined functions. Event Handling

UNIT-III

Introduction to .NET:-Framework features & architecture, CLR, MSIL, Assemblies and class libraries. Directory structure, page life cycle, state management. **Basic Web server Controls-** Displaying information: Label Controls, Literal Controls, Bulleted List, accepting User Input: Textbox controls, RadioButton and RadioButtonList Controls, CheckBox and CheckBoxList Controls. Button controls, LinkButton Control, ImageButton Control, Using Hyperlink Control, DropDownList, ListBox,

UNIT-IV

Asp.Net Validation Controls: Required Field Validator Control, Regular Expression Validator Control, Compare Field Validator Control, Range Validator Control, Validation Summary Control, Custom Validator Control, Masterpages, File upload, Navigation Controls: Sitemap Path, Tree, Menu

UNIT-V

Working with Data base – Introduction to SQL Server Connectivity with SQL server, ADO.Net: inserting, updating, deleting and accessing records from database, Data Controls: GridView, FormView

Text Books:

1. .NET Programming Black Book by steven holzner –dreamtechpublications.
2. Introduction to .NET framework-Worx publication.msdn.microsoft.com/net/.

Reference Books

1. Deitel & Deitel, internet & world wide web How to program, Pearson Education
2. J. Jaworski, Mastering Javascript, BPB Publications, 1999
3. T. A. Powell, Complete Reference HTML (Third Edition),TMH, 2002
   4. G. Buczek, ASP.NET Developers Guide, TMH, 2002

B.Sc./BA – III YEAR

COMPUTER APPLICATION

Paper – Web Technology using ASP.NET

Practical List

1. Create a web form for addition of two numbers.
2. Create a web form for Simple Interest.
3. Create a web form for Factorial.
4. Create a web form for Prime number.
5. Create a web form for matching the value of two textboxes.
6. Create a web form for Calculator.
7. Create a web form for to demonstrate the session.
8. Create a web form with one list box and three check boxes named php, java, c respectively. On check and uncheck name of the check box should be added and removed to and from the list box.
9. Create a web form with one DropDownList and demonstrate addition of items at first and last position. Show deletion also.
10. Demonstrate FileUpload control.
11. Demonstrate Validation Controls.
12. Create a sample college website and use Masterpage and Menu control.
13. Create Student Registration Form and corresponding database. Fetch the data into GridView Control.
14. Demonstrate adrotator control.

Max Marks: 40   **Min Marks: 13**

Objective:
To provide an understanding of principal concepts, major issues, technologies and basic approaches in cyber security. Develop a basic understanding of cryptography, how it has evolved and some key encryption techniques used today. Knowledge of basic SW engineering methods and practices, and their appropriate application.

Course Outcome:
Provide security of the data over the network. Do research in the emerging areas of cryptography and network security. Basic knowledge and understanding of the analysis and design of complex systems. Ability to apply software engineering principles and techniques. To produce efficient, reliable, robust and cost-effective software solutions.

UNIT-I

Information Security Concepts: Information security issues, goals, architecture, Security Services and Mechanisms. **Introduction to Cryptography:** Network security model, Cryptographic systems, Cryptanalysis. **Types of Cryptography:** Symmetric key and Asymmetric Key Cryptography, Encryption and Decryption Techniques. **Cryptographic Algorithms:** Data Encryption Standard, Advanced Encryption Standard, RSA (Introductory concepts only)

UNIT-II

Overview of Security threats and Vulnerability: CIA Triad , Threats and attacks . **Malware:** Viruses, Worms, Trojan horses. **Security Counter Measures:** Intrusion Detection, Antivirus Software. **Information Security**: Privacy and Ethics, Cyber Crime and Cyber laws (IT Act).

UNIT-III

Software Characteristics, Components and Applications. Software Engineering – A Layered Technology. **Software Process Models** [Linear Sequential Model, Prototype and RAD Model]. **Evolutionary Software Process Models** [Incremental Model and Spiral Model].

UNIT-IV

Project Management Concepts: People, Product, Process and Project. **Software Project Planning:** Objectives, Scope, Project Estimation, Decomposition Techniques. Empirical Estimation Models.

UNIT-V

S/W Quality Assurance: Quality Concepts, SQA activities, S/W Reviews, Formal Technical Reviews, S/W Reliability. **S/W Testing Techniques:** Testing Fundamentals, Test Case Design, White and Black Box Testing, Basic Path Testing, Unit Testing, Integration Testing, Validation Testing, System Testing, Debugging.

Text Books:

1. Software Engineering By R.S.Pressman,Edition V- [Unit 1-4 & CASE]
2. An Integrated Approach To Software Engineering By Pankaj Jalote
3. Forouzan, B.A., Cryptography & Network Security. Tata McGraw-Hill Education, 2010
4. Kahate, A. Cryptography and Network Security. McGraw-Hill Higher Ed., 2009.
5. Godbole, N., Information Systems Security: Security Management, Metrics, Frameworks and Best Practices. 1st Ed. John Wiley & Sons India, 2009. Page 11 of 46 Syllabus of M-Tech. in Computer Science & Technology (Cyber Security) 2018-19

Reference Books:

1. Software Engineering (7th Edition) Addison- Wesley 2004 ,Ian Sommerville
2. Software Engineering Hand book Auerbach publication, Jessica Keyes
3. Software Engineering Principles and Practice 2nd edition Wiley
4. Riggs, C., Network Perimeter Security: Building Defence In-Depth, AUERBACH, USA, 2005.
5. Northcutt S., Inside Network Perimeter Security, 2nd Ed., Pearson Education, 2005.
6. Stallings, W., Network Security Essentials: applications and standards. 3rd ed. Pearson Education India, 2007.
7. Stallings, W., Cryptography and Network Security: Principles and Practice. 6th ed. Pearson, 2004.
8. Kim. D., and Solution, M.G., Fundamentals of Information System Security. Jones & Bartlett Learning, 2010.