SEMESTER- VI BCA

Sl. No.	Subject Codes	Subject	Periods			Evaluation Scheme				End Semester		Total	Credit
			L	T	P	CT	TA	Total	PS	TE	PE		
1	BCA-601	Computer Network Security	3	1	0	20	10	30		70		100	4
2	BCA-602	Information System: Analysis Design & Implementation	3	1	0	20	10	30		70		100	4
3	BCA-603	Knowledge Management	3	1	0	20	10	30		70		100	4
4	BCA-061	DOT .NET Programming	3	1	0	20	10	30		70		100	4
5	BCA-611	Major Project	0	0	10				100		100	200	5
												600	21

Elective-
BCA-061 – DOT .NET Programming

BCA-062   Python Programming

BCA-063 Web Technologies-I

BCA-064 Cloud Security & Management

Subject: -	Subject Code	Max.marks	Credit
Computer Network Security	BCA-601	70	4

S.N.	Unit number	Topics	Sub Topics
1.	1.	**Introduction**	Attack, Services and Mechanism, Model for Internetwork Security. Cryptography: Notion of Plain Text, Encryption, Key, Cipher Text, Decryption and cryptanalysis; Public Key Encryption, digital Signatures and Authentication.
2.	2.	**Network Security**	Authentication Application: Kerveros, X.509, Directory Authentication Service, Pretty Good Privacy, S/Mime.
3.	3.	**IP security Architecture**	Overview, Authentication header, Encapsulating Security Pay Load combining Security Associations, Key Management.
4.	4.	**Web Security**	Requirement, Secure Socket Layer, Transport Layer Security, and Secure Electronic Transactions.
5.	5.	**Network Management Security**	Overview of SNMP Architecutre-SMMPVI1 Communication Facility, SNMPV3.
6.	6.	**System Security**	Intruders, Viruses and Relate Threats, Firewall Design Principles. Comprehensive examples using available software platforms/case tools, Configuration Management.

Referential Books:
1. W. Stallings, Networks Security Essentials: Application & Standards, Pearson Education, 2000.
2. W.Stallings, Cryptography and Network Security, Principles and Practice,

Pearson Education, 2000.

Subject: -	Subject Code	Max.marks	Credit
Information System: Analysis Design & Implementation	BCA-602	70	4

S.N.	Unit number	Topics	Sub Topics
1.	1.	**Overview of System Analysis and Design**	Systems Development Life Cycle; concept and Models: requirements determination, logical design, physical design, test planning, implementation, planning and performance evaluation, communication, interviewing, presentation skills; group dynamics; risk and feasibility analysis; group based approaches, JAD, structures walkthroughs, and design and code reviews; prototyping; database design software quality metrics; application categories software package evaluation and acquisition.
2.	2.	**Information Requirement Analysis**	Process modeling with physical logical data flow diagrams, data modeling with logical entity relationship diagrams.
3.	3.	**Developing a Proposal**	Feasibility study and cost estimation.
		System Design	Design of input and control, design of output and control, file design/database design, process, user interface design, prototyping; software constructors; documentation.
4.	4.	**Application Development Methodologies and CASE tools**	Information engineering structured system analysis and design, and object oriented methodologies for application development data modeling, process modeling, user interface design, and prototyping, use of computer aided software engineering (CASE) tools in the analysis design and implementation of information systems.
5.	5.	**Design and Implementation on OO Platform**	Object oriented analysis and design through object modeling technique, object modeling, dynamic modeling and functional object oriented design and object oriented programming systems for implementation, object oriented data bases.
6.	6.	**Managerial issues in**	

		Software Projects	Introduction to software markets; planning of software projects, size and cost estimates; project scheduling; measurement of software quality and productivity, ISO and capability maturity models for organizational growth.

Referential Books:
1. I.T.Haryszkiewycz, Introduction of System Analysis and Design, Pearson Education, (PHI) 1998.
2. V.Rajaraman, Analysis and Design of Information System, Pearson Education, 1991.
3. J.A.Senn, "Analysis and Design of Information Systems"
4. J.K.Whiten., L.D.Bentley, V.M.Beslow, "System Analysis and Design Methods", (Galgotia Publications Pvt.Ltd.) 1994

Subject: -	Subject Code	Max.marks	Credit
Knowledge Management	BCA-603	70	4

S.N.	Unit number	Topics	Sub Topics
1.	1.	**Business Intelligence and Business Decisions**	Modeling Decision Process; Decision support systems; Group decision support and Groupware Technologies.
2.	2.	**Executive Information and support Systems**	Business Expert System and AI, OLTO & OLAP; Data Warehousing; Data Marts, Data Warehouse architecture; Tools for data warehousing.
3.	3.	**Multi- Dimensional analysis**	Data mining and knowledge discovery; Data mining and Techniques; Data mining of Advance Databases.
4.	4.	**Knowledge Management Systems**	Concept and Structure KM systems, techniques of knowledge management appreciation & limitation.

Referential Books:
1. Decision support system, EIS, 2000
2. W.H.Inmon, "Building Data Warehousing", Willey, 1998.

3. Han, Jiawei, Kamber, Michelinal, " Data Mining Concepts &
Techniques", Harcourt India, 2001

Course Code	BCA -061	Year/Semester	VI
Course Name	DOT .NET Programming		
Credits	4		

DOT NET DOT .NET Programming

Objective: To gain knowledge about the methodologies behind VB.Net and ASP.Net and
helps the students to develop Dot Net based application using ADO.NET and SQL Managed
Provider-OLEDB Managed Provider.

Unit I

Introduction to . NET Framework, Introducing VB.NET: New Object Oriented Capabilities-
Inheritance- Parameterized Constructors- Overriding- Overloading- Shared Members-
Events- Exception Handling-.NET Framework Class Hierarchy-The System Namespace.
File I/O: Using the System.IO Hierarchy- Streaming text in and out of Text Files- Object
Serialization and Deserialization.

Unit II

 Introduction to ADO.NET: Comparison between ADO & ADO.NET—The difference
between Connection Model & Disconnected Model – difference between the DataSet and
RecordSet- The Dataset Model. Accessing Data using ADO.NET: dataset-
DataAdapterDataRelation. The two Managed Providers: SQL Managed Provider-OLEDB
Managed Provider. The ADO.NET Object Model: OleDbConnection
/SQLConnectionOleDbCommand/SQLCommand-
OleDbDataReader/SQLDataReaderOleDbDataAdapter/SQLDataAdapter-The DataSet.
Using the Binding Manager to bind controls to the data - Working with Master-Detail
relationship.

Unit III

Differences between ASP and ASP.NET. ASP.NET Web Forms: The code behind Web
Form-Separations of content & Business logic-Life Cycle of a Web Form Page-Stages in
Web Form Processing

Unit IV

ASP.NET Server Controls. Web Forms Server Controls Recommendation: Validation
Controls-Controls that incorporate logic to validate user inputs like a required field,
between ranges, or pattern matching. ASP.NET Data Access: Data Binding Server
Controls-Viewing Data Collections in a Grid. ASP.NET Caching Mechanism for caching
Dynamic response data. Page Output Caching