

SADAKATHULLAH APPA COLLEGE
(AUTONOMOUS)

(Reaccredited by NAAC with 'A' GRADE and ISO 9001: 2008 certified)

Rahmath Nagar, Tirunelveli – 627 011

DEPT. OF COMPUTER SCIENCE (SF)



B.Sc. (Information Technology)

UNITIZED SYLLABUS (CBCS)

FOR

(2011 - 2014)

(Applicable for students admitted in June 2011 and onwards)

**(Updated as per the resolutions passed in the
Academic Council Meeting held on 14-03-2013)**

**B.Sc. - INFORMATION TECHNOLOGY (2011 - 2014)
COURSE STRUCTURE (CBCS)**

I SEMESTER				II SEMESTER			
PART	COURSE	H/W	C	PART	COURSE	H/W	C
I	Tamil / Arabic	6	3	I	Tamil / Arabic	6	3
II	English	6	3	II	English	6	3
III	Core - 1	4	4	III	Core - 2	4	4
	Core Practical - I *	2	--		Core Practical - I *	2	3
	Allied - 1	4	4		Allied - 2	4	4
	Allied Practical - I *	2	--		Allied Practical - I *	2	2
IV	Skill Based Elective - 1	3	2	IV	Skill Based Elective - 2	3	2
	Social Value Education	3	2		Environmental Studies	3	2
TOTAL		30	18	TOTAL		30	23
III SEMESTER				IV SEMESTER			
III	Core - 3	6	5	III	Core - 6	6	5
	Core - 4	5	5		Core - 7	5	5
	Core - 5	5	4		Core - 8	5	4
	Core Practical - II *	2	--		Core Practical - II *	2	3
	Allied - 3	4	4		Allied - 4	4	4
	Allied Practical - II *	2	--		Allied Practical - II *	2	2
IV	Skill Based Elective - 3	3	2	IV	Skill Based Elective - 4	3	2
	Non Major Elective -1	3	2		Non Major Elective - 2	3	2
TOTAL		30	22	TOTAL		30	27
V SEMESTER				VI SEMESTER			
III	Core - 9	5	5	III	Core - 12	5	5
	Core - 10	5	4		Core - 13	5	4
	Core - 11	5	4		Core Elective - 2	4	4
	Core Elective - 1	4	4		Project	5	5
	Core Practical - III *	3	--		Core Practical - III *	3	4
	Core Practical - IV *	3	--		Core Practical - IV *	3	4
	Core Elective Practical *	2	--		Core Elective Practical *	2	2
IV	Skill Based Elective - 5	3	2	IV	Skill Based Elective - 6	3	2
TOTAL		30	19	TOTAL		30	30

* Practical – End of even semester

B.Sc. - INFORMATION TECHNOLOGY (2009 - 2012)										
DISTRIBUTION OF CREDITS , NO. OF PAPERS & MARKS										
PART	COURSE		SEMESTER	HOURS	CREDITS	PAPERS	MARKS			
I	Tamil / Arabic		I to II	12	6	2	200			
II	English		I to II	12	6	2	200			
III	Core + Practical		I to VI	85	72	13 + 4	1700			
	C.Elective + Pract.+ Project		V & VI	17	15	2 + 1 + 1	400			
	Allied + Practical		I to IV	24	20	4 + 2	600			
IV	Skilled Based Elective		I to VI	18	12	6	600			
	Non Major Elective		III & IV	6	4	2	200			
	Social Value Education		I	3	2	1	100			
	Environmental Studies		II	3	2	1	100			
V	Extension Activities		I to IV	--	1	--	100			
TOTAL				180	140	41	4200			
SEMESTER WISE DISTRIBUTION OF HOURS										
PART	I	II	III				IV			TOT.
SEM	T/A	ENG	CORE	CE	PRO	AL	SBE	NME	SVE/ES	
I	6	6	4 + 2	-	-	4 + 2	3	-	3	30
II	6	6	4 + 2	-	-	4 + 2	3	-	3	30
III	-	-	16 + 2	-	-	4 + 2	3	3	-	30
IV	-	-	16 + 2	-	-	4 + 2	3	3	-	30
V	-	-	15 + 6	4 + 2	-	-	3	-	-	30
VI	-	-	10 + 6	4 + 2	5	-	3	-	-	30
TOT	12	12	85	12	5	24	18	6	6	180

B.Sc. - INFORMATION TECHNOLOGY (2009 - 2012)

TITLE OF THE PAPERS, CREDITS & MARKS

I SEMESTER								
P	SUB	TITLE OF THE PAPER	S.CODE	H/W	C	MARKS		
						I	E	T
I	TA 1	இக்காலத் தமிழ் OR	11ULTA11	6	3	25	75	100
	AR 1	Applied Grammar and Translation	11ULAR11					
II	EN 1	Practical Course in Listening and Speaking	11ULEN11A	6	3	40	60	100
III	C 1	Introduction to Computers	11UCIT11	4	4	25	75	100
	CP I	Core Practical - I	--	2	--	EXAM II SEM		
	A - 1	MS Office	11UAIT11	4	4	25	75	100
	A P	Allied Practical - I	--	2	--	EXAM II SEM		
IV	SBE 1	Principles of IT	11SEIT11	3	2	25	75	100
	SVE	Social Value Education	11USVE11	3	2	25	75	100
TOTAL				30	18	165	435	600
II SEMESTER								
I	TA 2	சமயத் தமிழ்	11ULTA21	6	3	25	75	100
	AR 2	Functional Arabic and Translation	11ULAR21					
II	EN 2	Prose, Poetry and Composition	11ULEN21A	6	3	25	75	100
III	C 2	C Programming	11UCIT21	4	4	25	75	100
	CP I	Core Practical - I	11UCIT2P	2	3	40	60	100
	A 2	Graphics and Animation Tools	11UAIT21	4	4	25	75	100
	A P I	Allied Practical - I	11UAIT2P	2	2	40	60	100
IV	SBE 2	System Architecture	11SEIT21	3	2	25	75	100
	ES	Environmental Studies	11UENS21	3	2	25	75	100
TOTAL				30	23	230	570	800
III SEMESTER								
III	C3	Digital Principles & Applications	11UCIT31	6	5	25	75	100
	C4	Object Oriented Programming with C++	11UCIT32	5	5	25	75	100
	C5	Introduction to HTML & XML	11UCIT33	5	4	25	75	100
	CP II	Core Practical - II	--	2	--	EXAM IV SEM		
	A 3	Desk Top Publishing	11UAIT31	4	4	25	75	100
	A P II	Allied Practical - II	--	2	--	EXAM IV SEM		
IV	SBE 3	Fundamentals of Microprocessor	11SEIT31	3	2	25	75	100
	NME 1	Choose any one from the list	--	3	2	25	75	100
TOTAL				30	22	150	450	600

B.Sc. - INFORMATION TECHNOLOGY (2011-2014) TITLE OF THE PAPERS, CREDITS,**Marks**

IV SEMESTER								
P	SUB	TITLE OF THE PAPER	S.CODE	H/W	C	MARKS		
						I	E	T
III	C6	Object Oriented Programming with Java	11UCIT41	6	5	25	75	100
	C7	Client Server Computing	11UCIT42	5	5	25	75	100
	C 8	Modern Operating Systems	11UCIT43	5	4	25	75	100
	CP II	Core Practical - II	11UCIT4P	2	3	40	60	100
	A II - 2	Unix Shell Programming	11UAIT41	4	4	25	75	100
	A II P	Allied Practical - II	11UAIT4P	2	2	40	60	100
IV	SBE 4	Data Structures	11SEIT41	3	2	25	75	100
	NME 2	Choose any one from the list	--	3	2	25	75	100
TOTAL				30	27	230	570	800
V SEMESTER								
III	C 9	GUI design with VB	11UCIT51	5	5	25	75	100
	C 10	Software Engineering	11UCIT52	5	4	25	75	100
	C 11	Computer Network	11UCIT53	5	4	25	75	100
	CE 1	A) J2EE OR	11UEIT5A	4	4	25	75	100
		B) ORACLE	11UEIT5B					
	CP III	Core Practical - III	--	3	--	EXAM VI SEM		
	CP IV	Core Practical - IV	--	3	--	EXAM VI SEM		
CE P	Core Elective Practical	--	2	--	EXAM VI SEM			
IV	SBE 5	Management Information System	11SEIT51	3	2	25	75	100
	TOTAL				30	19	125	375
VI SEMESTER								
III	C 12	Mobile Computing	11UCIT61	5	5	25	75	100
	C 13	Computer Graphics	11UCIT62	5	4	25	75	100
	CE 2	A) C# Programming OR	11UEIT6A	4	4	25	75	100
		B) PHP	11UEIT6B					
	P	Project	11UPIT61	5	5	--	100	100
	CP III	Core Practical - III	11UCIT6P1	3	4	40	60	100
	CP IV	Core Practical - IV	11UCIT6P2	3	4	40	60	100
CE P	Core Elective Practical	11UEIT6P	2	2	40	60	100	
IV	SBE 6	Internet Security	11SEIT61	3	2	25	75	100
	TOTAL				30	30	220	580

PART I & II (2011 - 2014 ONWARDS)

TITLE OF THE PAPERS, CREDITS & MARKS

ONE YEAR LANGUAGE COURSES (B.Sc. - CS, IT , BCA. , B.COM., B.COM . (CA) , BBA & BBM)								
SEM	TITLE OF THE PAPER	S.CODE	H/W	C	MARKS			
					I	E	T	
PART I - TAMIL								
I	இக்காலத் தமிழ்	11ULTA11	6	3	25	75	100	
II	சமயத் தமிழ்	11ULTA21	6	3	25	75	100	
TOTAL			12	6	50	150	200	
PART I - ARABIC								
I	Applied Grammar and Translation	11ULAR11	6	3	25	75	100	
II	Functional Arabic and Translation	11ULAR21	6	3	25	75	100	
TOTAL			12	6	50	150	200	
PART II - ENGLISH								
I	Practical Course in Listening and Speaking	11ULEN11A	6	3	40	60	100	
II	Prose, Poetry and Composition	11ULEN21A	6	3	25	75	100	
TOTAL			12	6	65	135	200	
TWO YEARS LANGUAGE COURSES (B.A. - HIS., ENG.LIT., B.Sc. - MATHEMATICS, PHYSICS, CHEMISTRY, ADVANCED ZOOLOGY AND BIOTECHNOLOGY & MICROBIOLOGY)								
PART I - TAMIL								
I	இக்காலத் தமிழ்	11ULTA11	6	3	25	75	100	
II	சமயத் தமிழ்	11ULTA21	6	3	25	75	100	
III	பயன்பாட்டுத் தமிழ்	11ULTA31	6	3	25	75	100	
IV	அறிவியல் தமிழ்	11ULTA41	6	3	25	75	100	
TOTAL			24	12	100	300	400	
PART I - ARABIC								
I	Applied Grammar and Translation	11ULAR11	6	3	25	75	100	
II	Functional Arabic and Translation	11ULAR21	6	3	25	75	100	
III	Conversational Arabic	11ULAR31	6	3	25	75	100	
IV	Quran , Hadeeth and Grammar	11ULAR41	6	3	25	75	100	
TOTAL			24	12	100	300	400	
PART II - ENGLISH								
I	Prose, Poetry and Functional Grammar I	11ULEN11	6	3	25	75	100	
II	Prose, Poetry and Functional Grammar II	11ULEN21	6	3	25	75	100	
III	One act plays and word power	11ULEN31	6	3	25	75	100	
IV	A Course in Spoken English	11ULEN41	6	3	40	60	100	
TOTAL			24	12	115	285	400	

PART III (2011 - 2014 ONWARDS)

DEPT. OF INFORMATION TECHNOLOGY CBCS SYLLABUS - B.Sc. - I.T. (2011 - 2014 ONWARDS)								
PART III - CORE, CORE ELECTIVE & PROJECT (FOR B.Sc. - I.T. MAJOR)								
SEM	P	TITLE OF THE PAPER	S.CODE	H/W	C	MARKS		
						I	E	T
I	C1	Introduction to Computers	11UCIT11	4	4	25	75	100
	CP	Core Practical - I	--	2	--	EXAM II SEM		
II	C2	C Programming	11UCIT21	4	4	25	75	100
	CP	Core Practical - I	11UCIT2P	2	3	40	60	100
III	C3	Digital Principles & Applications	11UCIT31	6	5	25	75	100
	C4	Object Oriented Programming with C++	11UCIT32	5	5	25	75	100
	C5	Introduction to HTML and XML	11UCIT33	5	4	25	75	100
	CP	Core Practical - II	--	2	--	EXAM IV SEM		
IV	C6	Object Oriented Programming with Java	11UCIT41	6	5	25	75	100
	C7	Client Server Computing	11UCIT42	5	5	25	75	100
	C8	Modern Operating Systems	11UCIT43	5	4	25	75	100
	CP	Core Practical - II	11UCIT4P	2	3	40	60	100
V	C9	GUI design with VB	11UCIT51	5	5	25	75	100
	C10	Software Engineering	11UCIT52	5	4	25	75	100
	C11	Computer Networks	11UCIT53	5	4	25	75	100
	CE1	A) J2EE OR	11UEIT5A	4	4	25	75	100
		B) RDBMS	11UEIT5B					
	CP	Core Practical - III	--	3	--	EXAM VI SEM		
		Core Practical - IV	--	3	--	EXAM VI SEM		
CEP	Core Elective Practical	--	2	--	EXAM VI SEM			
VI	C12	Mobile Computing	11UCIT61	5	5	25	75	100
	C13	Computer Graphics	11UCIT62	5	4	25	75	100
	CE2	A) C# Programming OR	11UEIT6A	4	4	25	75	100
		B) PHP	11UEIT6B					
	P	Project	11UPIT61	5	5	--	100	100
	CP	Core Practical - III	11UCIT6P1	3	4	40	60	100
		Core Practical - IV	11UCIT6P2	3	4	40	60	100
	CEP	Core Elective Practical	11UEIT6P	2	2	40	60	100
TOTAL				102	87	575	1525	2100

DEPT. OF INFORMATION TECHNOLOGY CBCS SYLLABUS (2011 - 2014 ONWARDS)								
PART III - ALLIED I - OFFICE TOOLS & SHELL PROGRAMMING (FOR B.Sc. - I.T. MAJOR)								
SEM	No.	TITLE OF THE PAPER	S.CODE	H/W	C	MARKS		
						I	E	T
I	1	MS Office	11UAIT11	4	4	25	75	100
		Allied Practical - I	--	2	--	EXAM II SEM		
II	2	Graphics and Animation Tools	11UAIT21	4	4	25	75	100
		Allied Practical - I	11UAIT2P	2	2	40	60	100
III	3	Desk Top Publishing	11UAIT31	4	4	25	75	100
		Allied Practical - II	--	2	--	EXAM IV SEM		
IV	4	Unix Shell Programming	11UAIT41	4	4	25	75	100
		Allied Practical - II	11UAIT4P	2	2	40	60	100
TOTAL				24	20	180	420	600
PART IV - SKILL BASED ELECTIVE (FOR B.Sc. - I.T. MAJOR)								
I	1	Principles of IT	11SEIT11	3	2	25	75	100
II	2	System Architecture	11SEIT21	3	2	25	75	100
III	3	Fundamentals of Micro Processor	11SEIT31	3	2	25	75	100
IV	4	Data Structures	11SEIT41	3	2	25	75	100
V	5	Management Information System	11SEIT51	3	2	25	75	100
VI	6	Internet Security	11SEIT61	3	2	25	75	100
TOTAL				18	12	150	450	600
PART IV - NON MAJOR ELECTIVE (FOR OTHER MAJORS)								
III	1	Office Automation	11NEIT31	3	2	25	75	100
IV	2	C Programming	11NEIT41	3	2	25	75	100
TOTAL				6	4	50	150	200
PART IV - SVE & ES (FOR ALL MAJORS)								
I	1	Social Value Education	11USVE11	3	2	25	75	100
II	2	Environmental Studies	11UENS21	3	2	25	75	100
TOTAL				6	4	50	150	200
PART - V								
I to IV	Extension Activities			-	1	100	-	100

PART III - CORE, CORE ELECTIVE & PROJECT

I SEMESTER 2010-2013			
C 1	INTRODUCTION TO COMPUTERS		11UCIT11
Hrs / Week : 4	Hrs / Sem : 60	Hrs / Unit : 12	Credits : 4

UNIT I

An overview of the computer system- the shapes of computers today – Transforming Data into information –CPUs used in personal computers.

UNIT II

Standard method of input –Alternative methods of input- monitor sound system- Devices that output Hardcopy – Types of storage devices- Measuring device performance.

UNIT III

Operating system Basics- Pc operating Systems – Database management systems and Enterprise software- Networking Basics- networking at home and abroad.

UNIT IV

Internet Basics- Gelling Online- working online- Understanding multimedia – creating and Distributing New Media content.

UNIT V

The Basic of information systems- Building information systems – Creating computer programs- programming languages and the programming process.

TEXT BOOK :

1. Introduction to computers fourth Edition by peter Norton, Tata McGrew Hill.
Chapters : 1- 12, 16- 20, 23- 28.

II SEMESTER			
C 2	C PROGRAMMING		11UCIT21
Hrs / Week : 4	Hrs / Sem : 60	Hrs / Unit : 12	Credits : 4

UNIT I

Identifiers & Keyword – Data types – Constants– Variables –Input statement – Output Statement –Operators – Expressions – Assignment statement – IF, IF ELSE, SWITCH – Loop Statement – FOR Loop, WHILE LOOP , DO WHILE LOOP – Break Statement – Go To Statement.

UNIT II

Function & Program Structure – Defining Function – Return Statement – Types of Function – Argument – Local & Global Variable – Scope of the Variable – Recursion

UNIT III

Array Notation – Array Declaration – Initialization – Processing with Array – Array And Functions – Multidimensional array character array – Pointer decalaration – Pointer Arithmetic – Array of Pointers – Pointers & Functions.

UNIT IV

Preprocessors – Macros – Header Files – Standard Functions –Structures– Union – Bit fields – Type def – Enumeration.

UNIT V

Structures – Declaration of structure – Members – Accessing the members of a structure – Arrays of structures – Pointer to structure

TEXT BOOK:

1. Programming with C by E. Balagurusamy

I & II SEMESTERS		
CP I	CORE PRACTICAL I (Exam. end of II Sem)	11UCIT2P
Hrs / Week : 2	Hrs / Sem : 30	Credits : 3

C PROGRAMMING PRACTICAL

1. Program using If statement.
2. Program using while & do – while statement.
3. Program using switch statement.
4. Program using for statement.
5. Program using one dimensional array.
6. Program using two dimensional arrays.
7. Program using Functions.
8. Programs using Recursions.
9. Program using strings.
10. Program using Structure.

III SEMESTER			
C 3	DIGITAL PRINCIPLES & APPLICATIONS		11UCIT31
Hrs / Week : 6	Hrs / Sem : 90	Hrs / Unit : 18	Credits : 5

UNIT I

Number Representation

Number system – Codes BCD, ACSII – Boolean algebra – universal logic gates
(IC7400,IC7402) – Negative Numbers: 1's & 2' s complement representation .

UNIT II

Boolean Algebra - Simplification Kmap – sum of products method-Product of sums.

UNIT III

Combinational Logic.

Encoder, Decoder, 16 – 1 multiplexers, 1 – 16 Demultiplexers, Half adder, Full adder, Half Subtractor and Full subtracter.

UNIT IV

Sequential Logic

Flip – Flop: Rs,D,JK, m/s – JK flip flops – Triggering : level and edge – shift registers : Serial – in serial – out shift registers

UNIT V

Counters : synchronous and asynchronous counters – shift counter – ring counter – Up down counter

TEXT BOOKS:

1. Digital principles and Applications – Malvino and leach, TMH publications, fifth Editions.

REFERENCE BOOKS :

1. Digital computer Fundamentals – Thomas C.Bartee, TMH publications.
2. Digital Electronics – V.K.puri, TMH Publication, 1997.

III SEMESTER			
C 4	OBJECT ORIENTED PROGRAMMING WITH C++	11UCIT32	
Hrs / Week : 5	Hrs / Sem : 75	Hrs / Unit : 15	Credits : 5

UNIT I - Classes and objects

Introduction- c structures revisited - specifying a class- defining member functions - a c++ program with class - Making an outside function inline - Nesting of member functions - Private member functions - Array within a class - Memory allocation for objects - Static data members - Static member functions - Array of objects - Object as function arguments - Friendly functions - returning objects.

UNIT II - Constructors and Destructors

Introduction – constructors - parameterized constructors - multiple constructor in a class - constructor with default arguments - dynamic initialization of objects - copy constructor - dynamic constructors - constructing two - dimensional arrays - const objects - Destructors.

UNIT III - Operator overloading

Introduction - defining operator overloading - overloading unary operators - overloading binary operators - overloading binary operators using friends - manipulation of strings using operators - rules for overloading operators.

UNIT IV - Inheritance: Extending classes

Introduction - defining derived classes- single inheritance - making a private member inheritable - multilevel inheritance- multiple inheritance - hierarchical inheritance - hybrid inheritance - virtual base classes - abstract classes - constructors in derived classes- member classes: Nesting of classes.

UNIT V – Pointers & Working with files

Introduction - pointers to objects - this pointer - pointers to derived classes- Introduction- classes for file stream operations - opening and closing a file - detecting End-of-file - more about open(): file modes - file pointers and their manipulations- sequential input and output operations- updating a file: Random Access - error handling during file operations - command-line arguments.

TEXT BOOKS:

1. Object –Oriented Programming with C++ By E.Balagurusamy
Chapter 5(except 5.17, 5.18, 5.19) ,6, 7(except 7-8), 8 , 9(except 9-5, 9-6), and 11.

REFERENCE BOOKS:

1. Object – Oriented programming in Turbo C++ By Robert Lafore

III SEMESTER			
C 5	INTRODUCTION TO HTML AND XML	11UCIT33	
Hrs / Week : 5	Hrs / Sem : 75	Hrs / Unit : 15	Credits : 4

UNIT I

Introduction to HTML - History of HTML, HTML Documents, Anchor Tag, Hyper Links. Head and body sections - Header Section - Title, Prologue, Links, Colorful Web Page, Comment Lines.

UNIT II

Designing Body Sections -Heading printing, Aligning the headings, Horizontal rule, Paragraph, Tab Settings, Lists, Unordered Lists, Ordered Lists, Table Handling.

UNIT III

Frames: Frameset definition - Frame definition - Nested Framesets - Forms - Action Attribute - Drop Down list - Check Boxes - Radio Buttons - Text Field - Text Area - Password - Hidden - Submit and Reset Buttons.

UNIT IV

Introduction to XML_ Role Of XML – XML and The Web – XML Language Basics – SOAP – Web Services – Revolutions Of XML – Service Oriented Architecture (SOA).

UNIT V

XML – Name Spaces – Structuring With Schemas and DTD – Presentation Techniques – Transformation – XML Infrastructure.

TEXT BOOKS:

1. C. Xavier , *World Wide Web Design with HTML*, Tata McGraw-Hill Publishing.
2. Frank. P. Coyle, *XML, Web Services And The Data Revolution*, Pearson Education, 2002.

IV SEMESTER			
C 6	OBJECT ORIENTED PROGRAMMING WITH JAV	11UCIT41	
Hrs / Week : 6	Hrs / Sem : 90	Hrs / Unit : 18	Credits : 5

UNIT I

Features of Java : History – Characteristics of Java - Developing and Running a Java Program – Structure of a java program – Variables – Features of java – Data types – Type Conversion and casting – arrays – operators – Bitwise Operators – Left shift , right shift – Unsigned right sift operators – relation – Boolean logic – ternary operators.

UNIT II

Branching and Looping Statements: If, If-else, nested if else, if else if statement – Switch case- while loop- do while- for loop- beak, continue and return statement- Classes methods and objects examples-declaring objects – methods in classes – constructors –this keyword- class structure.

UNIT III

Extension to classes and methods: Methods overloading – passing objects to methods- passing arguments – returning objects – recursion – nested classes – string handling – command line execution – Inheritance: basic concepts – multilevel hierarchy – method overriding – abstract classes – Packages and Interfaces.

UNIT IV

Errors and Exception Handling: Compile time, runtime errors – exceptions – try and catch multiple catch- throw – java's built-in-exceptions. Multiple thread programming: java threads creating several threads – deadlock – controls on threads.

UNIT V

Input Output Operations: reading characters, sentences, writing to console, file processing , copying files Applets: Various applets: chkr, cs, de, font, ga ,lbg, rc, rrc,sp, common.html file. Graphics and Text: lines, rectangles, ellipse, arcs, polygons, paintmode, fonts, text

TEXT BOOK :

1. Programming in java 2 – R. Rajaram, SCITECH Publications (India) Pvt Ltd, Chennai 2001

REFERENCE BOOKS :

1. Java 2 – Complete Reference, Tata McGraw Hill Publications
2. Thomaswu – An Introduction to Object Oriented Programming with Java, Tata McGraw Publications, 2001.

IV SEMESTER			
C 7	CLIENT SERVER COMPUTING		11UCIT42
Hrs / Week : 5	Hrs / Sem : 75	Hrs / Unit : 15	Credits : 5

UNIT I

Communication – systems definitions- functions layers and protocols- OSI reference model – client/server components- remote procedure calls. Evolution of processing advantages of client/server computing

UNIT II

Distributed computing environment- multitiered, cooperative client/server and cooperative processing techniques. Single system image- distributed presentation- distributed processing, distributed data- Software distribution and management

UNIT III

Clients-role and functions of clients- GUI- requirements for standard GUI- GUI features – example GUIs-X terminal- motif-open look- Servers functions of server- hardware architecture for servers.

UNIT IV

Cooperative processing structure- presentation functions: distributed and remote presentations- application logic functions: distributed functions, transactions and distributed transaction processing- Data management logic functions: distributed data and data management architecture remote- data management.

UNIT V

Data distribution methods- relational model – manual extract – snap shot – replication- fragmentation – data distribution. Distributed data access: remote request- remote transaction- distributed transaction- distributed request. Database transaction management: database transaction- two phase commit protocols

TEXT BOOK :

1. Client/Server Architecture, Alex Berson, McGraw Hill international edition 1997.

REFERENCE BOOK:

1. Dewire, Client Server Computing, Tata McGraw Hill Publications, 1997.

IV SEMESTER			
C 8	MODERN OPERATING SYSTEMS		11UCIT43
Hrs / Week : 5	Hrs / Sem : 75	Hrs / Unit : 15	Credits : 4

UNIT I

Introduction : Evolution of Operating Systems- Types of Operating Systems- Different Views of the Operating System- The Journey of a Command Execution- Design and Implementation of Operating Systems.

UNIT II

Processes : The Process Concept- Systems Programmer's View of processes- The Operating System's view of processes- Operating System Services for process management- Scheduling- Scheduling Algorithms- Performance Evaluation.

UNIT III

Interprocess Synchronization : The need for Interprocess Synchronization- Mutual Exclusion- Semaphores- Hardware support for Mutual Exclusion- Queuing implementation of Semaphores- Classical problems in concurrent programming.

UNIT IV

Interprocess Communication And Synchronization : Critical region and conditional critical region- Monitors- Messages- Interprocess Synchronization and communication in ADA- Deadlocks.

UNIT V

Memory Management - Contiguous Allocation and Noncontiguous Allocation : Single-Process Monitor- Partitioned Memory Allocation-Static- Partitioned Memory Allocation-Dynamic- Segmentation. Noncontiguous Allocation: Paging- Virtual Memory.

UNIT V

File Management, Security, Protection : Security Threats and Goals- Penetration Attempts- Security policies and mechanisms- Authentication- Protection and Access Control- Formal Models of Protection- Cryptography—Worms and Viruses.

TEXT BOOK :

2. Operating Systems - Milan Milenkovic- Tata Mcgraw - Hill Edition – Second Edition.

REFERENCE BOOKS :

1. Operating System Concepts- Silberschatz and PeterB. Galvin Addison Wesley Publishers Sixth Edition.
2. Systems Programming And Operating Systems - Dhamdhere- Tata Mcgraw – Hill Edition.

III & IV SEMESTERS		
CP II	CORE PRACTICAL II (Exam end of IV Sem)	11UCIT4P
Hrs / Week : 2	Hrs / Sem : 30	Credits : 3

C + + PROGRAMMING PRACTICAL

1. Program to demonstrate all manipulators in C++.
2. Swap 2 Values
3. Evaluate an expression using macros (Macrosinic & inline function C++)
4. Compare any 2 elementary data types in C++ using function overloading.
5. Find m power n values using default arguments.
6. Program to perform simple banking operation.
7. Write a program using operator overloading .
8. Programs using multiple inheritance, hybrid inheritance, hierarchical inheritance, multilevel inheritance.
9. Program using polymorphism and virtual functions.
10. Create and copy a text file to another.

V SEMESTER			
C 9	GUI DESIGN WITH VB		11UCIT51
Hrs / Week : 5	Hrs / Sem : 75	Hrs / Unit : 15	Credits : 5

UNIT I

Integrated Development Environment (IDE) And Forms : Introducing Visual BASIC- Learning the IDE Features- Working with Forms: The Anatomy of a Form- Working with Form Properties- Tweaking a Form's Properties- Introducing Form events- Introducing Form methods- Working with Multiple Document Interface (MDI) Forms.

UNIT II

Logic And Program Flow, Data Types : Understanding Logical operators- Making Comparisons- Evaluating Conditions in code- Performing repetitive tasks. Introducing variables- variable types- Arrays- Constants.

UNIT III

Selecting And Using Controls : Introducing Controls- Command Buttons-Text Boxes- Labels- Option Buttons- Check Boxes- Frame controls- List Boxes- Combo Boxes- Image objects- Picture objects Timers- Scroll Bars- Drive Lists- Directory List Boxes- File List Boxes.

UNIT IV

Modules, Classes, Menus, And Tool Bars : Introducing Code Modules and Classes- Creating a Code Library- Working with sub procedures- Working with Function procedures- Using Private and public sub procedures. Understanding the Menu Object- Creating a menu with the Menu

UNIT V

Storing And Retrieving Data, Dialog Boxes : Working with ASCII Files- Data controls- Understanding the Anatomy of a database- Creating data bases with Visual Data Manager- Creating a Data base Table- Creating a Query- Modifying a table- DAO-RDO-ADO- Data reports.

TEXT BOOK :

1. Visual BASIC 6 In Record Time – Steve Brown – bpb Publications.

REFERENCE BOOKS :

1. Visual BASIC 6 – Paul Sheriff – PHI
2. The Complete Reference Visual Basic 6 – Noel Jerke - TATA McGRAW - HILL Edition

V SEMESTER			
C 10	SOFTWARE ENGINEERING		11UCIT52
Hrs / Week : 5	Hrs / Sem : 75	Hrs / Unit : 15	Credits : 4

UNIT I

Introduction : What is Software Engineering – Software Process – software Process model – software engineering methods. CASE Computer Based System Engineering System properties – system environment – system modeling – system engineering process – system requirements – system design – system evolution – system decommissioning – system procurement. Software processes: Software Process models: Process iteratin - Software Specification – design and implementation – Software validation – Software Evolution – automated process support.

UNIT II

Project Management : Project Management :Management activities – Project Planning – Project Scheduling - Risk management. Software requirement : Functional and non-functional requirements – user Requirements – system requirements – Software requirements document. System Models – Context models – Behavioural models – data models – Object models – CASE workbenches.

UNIT III

Software Prototyping : Prototyping in the software process – Rapid prototyping techniques – user interface prototyping .Architectural Design - System structuring – Control models – Modular decomposition – domain specified architecture.

UNIT IV

Object oriented design: Object and object classes – An object oriented design process – design evolution. Real time software - System design – real-time executives – monitoring and control systems – data acquisition systems. User Interface design: User Interface design – User interaction – information presentation – user support – interface evaluation. Verification and Validation: Verification and Validation planning – Software inspections.

UNIT V

Automated static analysis – clean – room software development . Software testing: Defect testing – Integration testing – Object oriented testing – Testing workbenches. Software cost estimation: Productivity – Estimation techniques – Algorithmic cost modeling – Project duration and staffing. Quality management: Quality assurance and standards – Quality planning – Quality control – Software measurement and metric.

TEXT BOOK : Software Engineering , IAN SOMMERVILLE , 6th Edition ,Pearson Education Asia Chapters 1 to 5,7,8,10,11,12,13,14,15,19,20,23,24.

REFERENCE BOOK :Software Engineering Theory and Practices, Shari Lawrence Pfleeger, 2nd Edition, Pearson Education Asia.

V SEMESTER			
C 11	COMPUTER NETWORKS		11UCIT53
Hrs / Week : 5	Hrs / Sem : 75	Hrs / Unit : 15	Credits : 4

UNIT I

Introduction – Evolution- need for networks- transmissions- analog and digital transmission. Communication modes: Simplex, Half and full Duplex modes. Synchronous and asynchronous data transfer- Different Transmission media used for networking

UNIT II

Network classification – topological, geographical and ownership based classifications. Switching and routing- Message, Circuit switching and packet switching, Comparison of different switching methods – Terminal handling

UNIT III

Network standards and OSI models : Types of standards, OSI layers and services. Data link layer protocols: Character and Bit oriented protocols, SDLC, HDLC and sliding window protocols.

UNIT IV

LAN standards: IEEE standards – The Ethernet – Comparison with OSI – Types – implementation – Ethernet frame format – Token Bus and Token Ring standards. X.25 protocols. ISDN Evolution and services- Broadband ISDN

UNIT V

Introduction to TCP/IP and Internet – Network Layer protocols – The Internet Protocol – Addressing – The domain name system, Transport Layer protocol- UDP and TCP Applications: FTP, TELNET, SMTP SNMP and HTTP.

TEXT BOOK :

1. Computer Networks – Fundamentals and applications – R.S . Rajesh and R. Balasubramanian, K.S Easwarakumar, Vikas Publications, New Delhi

REFERENCE BOOK :

1. Computer Networks – Andrew Tenanbaum

V SEMESTER			
CE 1 A	J2EE	11UEIT5A	
Hrs / Week : 4	Hrs / Sem : 60	Hrs / Unit : 12	Credits : 4

UNIT I

The java2 Enterprise Architecture – Why would Anyone need the Enterprise Edition?- The java2 Enterprise Edition (J2EE) Architecture – java 2 Enterprise Implementation Architectures- Essential Concepts – The world wide web context – Program Units and Files in J2EE.

UNIT II

Java Database Connectivity (JDBC)- What is JDBC? – The java.sql Package Structured Query Language (SQL) – Using JDBC – The Practice Databases – The Process of Building a JDBC Application

UNIT III

The Essentials of Java Server Pages (JSP)- Introduction to java server pages technology – Using Java Server Pages – Java Server Page Objects – Implicit JSP Objects- The out and request Objects

UNIT IV

The Architecture of Java Server Pages (JSP) – The Elements of the JSP- Language Set – JSP action elements – JSP Directives – Java Servlet Essentials – Java Servlet – The Generic Server Lifecycle – Servlet Packages, Classes, Interfaces and Methods

UNIT V

Java Servlet Construction Time – The General Servlet Development Process- A Servlet that Generates HTML- Handling Forms with Servlets – Enterprise Java Bean (EJB) Essentials – What is an Enterprise Java Bean?- Session Beans – Entity Beans Servers, Containers, and Beans- Services Required by Enterprise Java Beans – The Session bean – The Lifecycle of a Session Bean – The process of Building a Stateless Session Bean.

REFERENCE BOOKS:

1. Enterprise Java Beans by Richard Monson – Haifel (O'Really)
2. Java Server Page by Hans Bergsten, O'Really
3. Java Servlet programming 2nd Edition – panny coward, James Duncan Davidson O'Really

V SEMESTER			
CE 1B	ORACLE		11UEIT5B
Hrs / Week : 4	Hrs / Sem : 60	Hrs / Unit : 12	Credits : 4

UNIT I

Introduction to oracle server -data dictionary-table Space and data files -data blocks - extents and segments - Structure of Relational Databases – The Relational Algebra – The Extended Relational – Algebra operations – Modification of Database.

UNIT II

Data types –constraints-creating and maintaining tables –DDL –DML – arithmetic operators-logical operators-relational operators-other comparison operators.

UNIT III

Working with tables: function and grouping-built-in functions- character functions – numeric functions – data functions – other functions – conversion functions – nested function – group function-grouping data-having clause- Multiple tables: joins-set operations.

UNIT IV

Index – sequence – view – users – privileges and roles – synonyms.

UNIT V

PL/SQL: PL / SQR – triggers – stored procedures and functions – packages – cursors – transactions - Distributed processing: distributed processing – replication.

TEXT BOOK :

1. Jose. A. Ramalho – Learn Oracle, B.P.B Publications.

REFERENCE BOOK :

1. Database system using oracle – Nileshshah
Chapter 4 to 7, 10 to 12 and 14.

VI SEMESTER			
C 12	MOBILE COMPUTING		11UCIT61
Hrs / Week : 5	Hrs / Sem : 75	Hrs / Unit : 15	Credits : 5

UNIT I WIRELESS COMMUNICATION FUNDAMENTALS

Introduction – Wireless transmission – Frequencies for radio transmission – Signals – Antennas – Signal Propagation – Modes of propagation- line of sight transmission– Multiplexing – Modulations – Spread spectrum– TDMA – Cellular Wireless Networks.

UNIT II TELECOMMUNICATION NETWORKS

Telecommunication systems – GSM – GSM architecture-GPRS – DECT – Satellite Networks - Basics –Broadcast Systems – DAB - DVB.

UNIT III WIRELESS LAN

Wireless LAN – IEEE 802.11 - Architecture – services – MAC – Physical layer – IEEE 802.11a - HIPERLAN – Blue Tooth.

UNIT IV MOBILE NETWORK LAYER

Mobile IP – Tunneling and Encapsulation– Reverse Tunneling-Dynamic Host Configuration Protocol –Ad-hoc Networks- Routing – DSDV – DSR – Alternative Metrics.

UNIT V TRANSPORT AND APPLICATION LAYERS

Traditional TCP – Congestion Control- Mobility- Indirect TCP-Snooping TCP-Mobile TCP-WAP- WAP Specification-Wireless Datagram, Transaction, Session Protocol .

TEXT BOOKS

1. Jochen Schiller, "Mobile Communications", PHI/Pearson Education, Second Edition, 2003. (Unit I Chap 1,2 &3- Unit II chap 4,5 &6-Unit III Chap 7.Unit IV Chap 8- Unit V Chap 9&10.)
2. William Stallings, "Wireless Communications and Networks", PHI/Pearson Education, 2002. (Unit I Chapter – 7&10-Unit II Chap 9)

REFERENCES

1. Kaveh Pahlavan, Prasanth Krishnamoorthy, "Principles of Wireless Networks", PHI/Pearson Education, 2003.
2. Uwe Hansmann, Lothar Merk, Martin S. Nicklons and Thomas Stober, "Principles of Mobile Computing", Springer, New York, 2003.
3. Hazysztow Wesolowshi, "Mobile Communication Systems", John Wiley and Sons Ltd, 2002.

VI SEMESTER			
C 13	COMPUTER GRAPHICS		11UCIT62
Hrs / Week : 5	Hrs / Sem : 75	Hrs / Unit : 15	Credits : 4

UNIT I - Introduction to graphics

Application of computer graphics –Raster and vector Graphics – Display devices – Graphical Input devices.

UNIT II - Graphics Programming

Graphics in c++ – Coordinate system – Plotting pixels – Line drawing – Circle drawing – Other shapes – Setting drawing colors – Setting background colors – Line styles – Fill styles – Displaying texts – Animations.

UNIT III - Raster Graphics Algorithms

Line drawing – Polynomial – DDA – Bresenham's algorithm – Circle drawing – polynomial – trigonometric – Bresenham's algorithm – Midpoint algorithm.

UNIT IV

Geometrical transformations – 2D and 3D graphics – matrix representation – Homogeneous coordinates – window to view port transformations – Line clipping – Polygon clipping.

UNIT V - Multimedia

Overview – Multimedia operating systems – system requirements and configurations for multimedia – compression technology for multimedia – Multimedia tools – Developing and delivering a multimedia project – Applications of multimedia.

TEXT BOOKS:

1. Computer Graphics and Multimedia – Donald Hearn & paurlin Baker – computer Graphics, prentice Hall of India pvt Ltd.
2. Interactive computer Graphics –Neumann and Sproull McGrew Hill publications.
3. Multimedia by Tay Vaughan

VI SEMESTER			
CE 2A	C # PROGRAMMING		11UEIT6A
Hrs / Week : 4	Hrs / Sem : 60	Hrs / Unit : 12	Credits : 4

UNIT I

Introduction to .NET Framework – Comparing C# to C++ - Comparing C# to Java – How to write a Program in C#

UNIT II

Variable Types: Value Types – Reference Types –Escape sequences and verbatim Strings – Boxing Pointers : Pointer Notation – unsafe code – Pointers, Methods and Arrays . Arrays : Single Dimension Arrays- Rectangular Arrays – Jagged Arrays

UNIT III

Enumerations – Operators – Overloading Operators – Loop Statements : while, do while, for, for each statements – Jump Statements – Selection Statements

UNIT IV

Classes and Types – Inheritance – abstract Classes and Interface – Nested Classes – Structs – Namespaces – Class Attributes – Class Modifiers – Method Attributes and Modifiers – Formal parameters – Passing parameters – Method Overloading –Polymorphism : Method overloading, Method overriding – Constants , fields, Indexes and properties

UNIT V

Delegate Declaration and Instantiation- Events – Exceptions – Preprocessor Directives – C# Documentation Comments – Generating c# Documentation

TEXT BOOK :

- 1 Programming in c# - Balagurusamy E 2007 Mcgraw Hill Education Ltd.

VI SEMESTER			
CE 2B	PHP		11UEIT6B
Hrs / Week : 4	Hrs / Sem : 60	Hrs / Unit : 12	Credits : 4

Unit – I

Introduction: PHP History – Unique Feature – Writing and running the script – Mixing PHP with HTML – Variables and operators: Assigning values to variable – Destroying and inspecting variable content – PHP Data Types - Manipulating variable with operators.

Unit – II

Controlling program flow: writing simple conditional statements – if – if else – if else if -Switch case Repeating action with loops: while – do while – for loops – String functions – Numeric function.

Unit – III

Working with Array: Storing data in Array – Assigning Array values – Nesting Arrays – for each loop – Array functions –Generating Date and Time – Format Date and Time – Date and Time functions.

Unit – IV

Functions: Creating and invoking function – using arguments and return values - Cookies: Basics – Attributes – Headers – setting , reading and removing cookies – Session: Basics – Creating and removing sessions – Handling scripting Errors.

Unit – V

Working with database and SQL: Database, records, primary and foreign key - SQL statements – Creating database – Adding Tables – Adding Records – Executing Queries – modifying and removing records – Retrieving Data – Returning data as array and object.

Text Book:

PHP A Beginner's Guide – Vikram Vaswani – Tata Mc Graw Hill .

VI SEMESTER		
P	PROJECT	11UPIT61
Hrs / Week : 5	Hrs / Sem : 75	Credits : 5

OBJECTIVES :

At the end of the semester the students should be able to:

1. Identify the potential areas of research in his/her field;
2. Collect data from various sources including the internet, analyse them, make new connections and link them to life;
3. Read and write originally and usefully.

GUIDELINES :

1. The project may be done individually or in groups **not exceeding five per group.**
2. The minimum length of the project should be 30 pages in A4 size.
3. The project may not be experimental oriented .
4. Project should be cheap within the expense of students limit.
5. It can be of survey method.
6. Marks for the project report will be 100 divided as **80% for the presentation of project and 20% for viva-voce.**

V & VI SEMESTERS		
CP III	CORE PRACTICAL III (Exam end of VI Sem)	11UCIT6P1
Hrs / Week : 3	Hrs / Sem : 45	Credits : 4

GUI DESIGN WITH VB - PRACTICAL

- 1 Arithmetic Calculator
- 2 Menu Creation with simple file and edit options.
- 3 Designing a color mixer using basic colors.
- 4 Create a file open dialogue box to load a picture.
- 5 Create an application to format the text inside the text box.
- 6 Viewing records using data base controls.
- 7 Adding records to database
- 8 Display the information in the report form.
- 9 Create an application to move the elements from list to list and add new items.
- 10 Picture Animation.
- 11 Display the information in the report form.
- 12 Create an application to move the elements from list to list and add new items.
- 13 Picture Animation.

V & VI SEMESTERS		
CP IV	CORE PRACTICAL IV (Exam end of VI Sem)	11UCIT6P2
Hrs / Week : 3	Hrs / Sem : 45	Credits : 4

GRAPHICS

1. Program to draw line using Bresenham's Algorithm
2. Program to draw circle using Bresenham's Algorithm
3. program to draw an object and fill it using various styles
4. program using any filling algorithm
5. program to use transformations
6. program to draw a natural scenery
7. program to animate an object
8. program to draw text in various styles
9. program to scroll a text
10. program to clip a line

V & VI SEMESTERS		
CEP	CORE ELECTIVE PRACTICAL (Exam end of VI Sem)	11UEIT6P
Hrs / Week : 2	Hrs / Sem : 30	Credits : 2

ELECTIVE : 1A - J2EE PRACTICAL

1. Write a java code creates a connection to the access database on a harddisk using DSN named Bsc and display it message "Connected Success" if the connection is created.
2. Create a simple table (ACCESS) using the package Java.Sql. package
3. Create a table in the following information Name, Subject, Qualification, Percentage in an Access database using the class Java.Sql.Package
4. Simply fetch the table information using JDBC
5. Write a java code to insert the following data into the table "Success" which is created in Access.

Code	Names	Subject
1	One	100
2	Two	99
3	Three	99

6. Create a Servlet an simply display the message "Best Wishes to complete B.Sc(IT) Course Sucessfully" using Hyperlink
7. Create a simple servlet using the getParameter() method and display the output(From you input.html) in another form
8. Write a servlet code to change the explorere background color
9. Create the web script using the servlet code with your own idea
10. Write a HTML code to capture the user input Name, E-mail Id, about the student and display the information in the next form
11. Write a simple JSP code and display the output to next form
12. Write a program using Request and Out Objects in JSP
13. Pass the information to next form using the Methods GET, POST in servlets
14. Program to update a particular Record Using JDBC

(OR)

ELECTIVE : 1B - RDBMS PRACTICAL

1. Creating, modifying and dropping tables.
2. Creating tables with referential and check constraints.
3. Inserting, modifying, deleting rows.
4. Dropping, disabling / enabling constraints.
5. Retrieving rows with operators in where clause.
6. Retrieving rows with Character functions.
7. Retrieving rows with Number and Data functions.
8. Retrieving row with Group functions and HAVING.
9. Joining Tables (Inner and Outer)
10. Simple PL/SQL Programs.
11. PL/SQL programs with control structures.
12. PL/SQL programs with Cursors.
13. PL/SQL programs with Exception Handling.
14. Working with Triggers

(AND)

ELECTIVE : 2A - C # PROGRAMMING PRACTICAL

1. Find Maximum of an Array.
2. Find Factorial of a number using recursion.
3. Write a program to generate Fibonacci series for a given number.
4. Create a class with your own attributes and with suitable constructor and method to display the details of a Television Set.
5. Write a C# Program to evaluate the following function values

$$\begin{aligned}
 f(x) &= x^2 + \sin 2x && \text{if } x < 3 \\
 &= 10.3 && \text{if } x = 3 \\
 &= x^3 - \cos 3x && \text{if } x > 3
 \end{aligned}$$

6. Write a program to check whether a given integer is a prime number.
7. Write a program to calculate the value of Sin(x), Cos(x) and e^x
8. Write a program to add, subtract and multiply two matrices.
9. Define a class with certain attributes. Write a C# program to throw user defined Exception.
10. Write a program to copy contents of a file to two different destinations using command line input.

(OR)

ELECTIVE : 2B - PHP PRACTICAL

1. Write a PHP code using if else statement.
2. Write a PHP code using while loop.
3. Write a PHP code to print the multiplication table.
4. Write a PHP code using string and numeric functions.
5. Write a PHP code using array functions.
6. Design a HTML form using HTML Control and write a PHP code for displaying the employee's information.
7. Write a PHP code for Adding, Deleting, and Modifying records.
8. Write a PHP code using function.

PART III - ALLIED - OFFICE TOOLS AND SHELL PROGRAMMING

I SEMESTER			
A 1	MS OFFICE		11UAIT11
Hrs / Week : 4	Hrs / Sem : 60	Hrs / Unit : 12	Credits : 4

UNIT I

Introduction of Office 2000 : Exploring common features in Office. Working with files. Editing in Office 2000, Selecting, moving and Copying – Fonts and font styles. Mastering the basics of Word Creating Word documents – Editing document Texts – applying Text enhancements. Aligning and Formatting, adding Lists, Numbers, Symbols, Date and time, Replacing and checking text, getting into print.

UNIT II

Word : Applying advanced formatting techniques : Formatting pages. Working with Columns, Constructing high quality tables, Creating outlines in Word. Working with complex Documents

UNIT III

Managing data with Word, creating customized Merge Documents, Publishing online forms, adding reference to documents, working together on documents.

UNIT IV

Excel : Creating Excel Worksheet : Entering and editing Cell entries, Working with numbers, changing worksheet layout, other formatting options, Printing in Excel, using functions and references, naming ranges, creating easy to understand charts, using custom and special effects, using financial and statistical functions. Tracking and analyzing data with Excel, auditing Worksheet.

UNIT V

Power Point : Creating Power Point presentation : Creating a Basic Presentation, building presentations, modifying visual elements, formatting and checking text, adding objects, applying transitions, animations effects and linking, preparing handouts, taking the show on the road.

TEXT BOOK :

1. Gini Courter & Anette Marquis – MICROSOFT OFFICE 2000 No Experience required, BPB Publications.

REFERENCE BOOK :

1. Stephn L. Nelson – Office 2000 The Complete Reference, Tata McGraw Hill publishing Company Limited.

II SEMESTER			
A 2	GRAPHICS AND ANIMATION TOOLS		11UAIT21
Hrs / Week : 4	Hrs / Sem : 60	Hrs / Unit : 12	Credits : 4

UNIT I

How flash works – Uses of flash – What Flash can do – Animation – Interacting – Basic functions – Timeline – Stage – Toolbars – Menu bar – The inspectors – Viewing options – preferences.

UNIT II

Creating objects – Drawing toolbar – Various tools like line tool, oval tool etc – Editing objects – Grouping objects – Moving – Resizing – Rotating – Skewing – Reshaping – Copy – Paste – Aligning colour and text – colour palette – Adding colours – Adding text – Formatting and Manipulating text.

UNIT III

Symbols and instances – Creating and Editing symbols – Bitmaps and sounds – Frames and layers – Animation – Elements of Animation – Scenes – Frame by Frame Animation

UNIT IV

Motion Tweening – Motion guides – Motion guide Orientation – Shape tweening – Animating text – Movie clips - Interacting – Types – Frame Actions – Adding stop and play actions.

UNIT V

Adding go to actions Button symbols – Adding actions to buttons – Adding movie clips and sounds

TEXT BOOK :

1. Macromedia Flash MX: Training from the source by Chrissy Rey
2. Flash 8 – Shalini Gupta and Adity Gupta

I & II SEMESTERS		
AP I	ALLIED PRACTICAL I (Exam end of II Sem)	11UAIT2P
Hrs / Week : 2	Hrs / Sem : 30	Credit : 2

MS OFFICE PRACTICAL

MS WORD 2000

1. Typing letters and editing and printing.
2. Using Spell Check and Thesaurus.
3. Designing a cover page with word art.
4. Using Header, Footer Bookmark, Foot notes.
5. Mail merge a letter to an address file.
6. Typing 5 pages of Mathematical equations and symbols.

POWER POINT 2000

1. Creation of presentation with different styles on a given topic of current interest.
2. Preparing Presentation for a topic in the study of all course.

EXCEL 2000

1. Entering spread sheets with formula
2. Entering spreadsheet and doing statistical calculations
3. Printing Of Graphs and charts for the given data.
4. Creating and using macros.

(AND)

GRAPHICS AND ANIMATION TOOLS PRACTICAL

1. Make an object move across the screen.
2. Draw a path an object should follow.
3. Change the color of an object.
4. Using Shape Tweening you can change one object into another.
5. Create your own button and add a URL to it so it becomes a link.
6. Create a draggable movie clip in Flash
7. Animate an object
8. Play sound Play a video file

III SEMESTER			
A 3	DESK TOP PUBLISHING		11UAIT31
Hrs / Week : 4	Hrs / Sem : 60	Hrs / Unit : 12	Credits : 4

UNIT I - Introduction

Introduction to PageMaker - Layout window – Document setup –Basic page Maker function: Open, new, close, print, save and save as – Working with text : text tool, Text block – Editing Text – Formatting a Text: Character formatting, paragraph formatting and style creation & color creation

UNIT II - Working With Graphics

Graphics Tool, Masking, Rotation, Flipping, Cropping, positioning and scaling, Fill option. Arrange the object, Grouping, locking, Frame concept polygon setting and Text wrap properties Master Pages: Header and Footer and Template files - Story Editor: Find & Replace. Spell checker – Book Creation – TOC creation – Index creation both page reference and cross reference – Table Editor: Create Tables using Adobe Table, Import tables into PageMaker.

UNIT III - Corel Draw 8.0

Introduction to CorelDraw – features and advantages – Layout window – Basic CorelDraw functions: open, new, close, print, save and save as. Basic Tools: Rectangle, Ellipse, Text, Freehand drawing, Outline, fill and shape – Creating and manipulating text: Artistic text and paragraph text – Text based Roll –ups: Enveloping., Extruding, Text and Fit text to path.

UNIT IV - Object manipulation

Fill, outline, Group, ungroup weld, combine, breaking apart, Separate, Intersection. Trim, Align and ordering – Effects: transforming object, Shaping object –Graphic based roll – ups: Pen, Blend, Contour, symble, Preset, Layer and Powerclip option –Template creation Creating New: Arrow,pattern, symbol and style.

UNIT V - Photoshop 5.5

Introduction to photo Shop - Layout -basic functions: New, Open, close, save, save as and setup –painting tools: Air brush, paint brush, line pen, eraser, eye dropper, gradient and paint bucket tools. Text Tools – Zoom tool, Hand tool, selection tools: Move and sponge tools-vignettes and edge effects.

TEXT BOOKS :

1. Mastering Page Maker6 for windows 95 – by Rebecca Bridges Altman & Rick Altman Chapters: 1 - 7,8(Text Blocks)10 - 11, 13 - 15.
2. Corel Draw 8: The Official Guide by foster Coburn & Peter McCormick 3 - 8,11,13,15 -16, 18 - 22, 33, 37.
3. Photoshop 4 Studio skills by steven Moniz Chapters 1 - 6,10,12,13.

IV SEMESTER			
A 4	UNIX AND SHELL PROGRAMMING		11UAIT41
Hrs / Week : 4	Hrs / Sem : 60	Hrs / Unit : 12	Credits : 4

UNIT I

History of Unix – Architecture of Unix – File system – Simple commands – Creating files – Redirecting input – Indirection with input output and pipelines – Appending output to your files.

UNIT II

Personalized Unix – Changing Password – Login Profiles – Own login profile – Permissions – Changing owner, groups and permission – Multitasking – UNIX images & processes – background process – Killing process – Process status command – Multi line commands – Sleep – Scheduling Process.

UNIT III

Vi editor – Creating Text – Editing text – EX command mode – Shell within Vi – Printing and spooling – Simple formatting with pr.

UNIT IV

Sort – Head – Tail – Split – Cut – Paste – Find – tr – dd – grep family – fgrep – egrep – Sed – awk.

UNIT V

Shell Programming – Shell Scripting Steps Simple Shell Program – Shell and sub shell variables – Setting and unsetting variables – Positional parameters – meta characters – Loops – test – read – error handling – system administration.

TEXT BOOK :

1 UNIX Complete by Peter Dyson, Stan Kelly – Bootle and John Heilbern.

III & IV SEMESTERS		
AP II	ALLIED PRACTICAL II (Exam end of IV Sem)	11UAIT4P
Hrs / Week : 2	Hrs / Sem : 30	Credit : 2

DTP PRACTICAL

PAGE MAKER

1. Preparing simple document with formatting.
2. Document preparation with types of Equations.
3. Creating and Using new colors and styles (user defined)
4. Prepare document with column layout.
5. Applying word wrap options.
6. Design an invitation model.
7. Applying utility menu plugins.
8. Creating TOC .
9. Creating index.
10. Prepare document with tables.

COREL DRAW

11. Document with print merging.
12. Draw a simple pictures.
13. Applying roll ups: Envelop, Extrude, Contour, Blend.
14. Creating and Adding new symbols, patterns arrows.
15. Designing a visiting card.
16. Combining text and graphic object.
17. Text manipulation with column layout.

PHOTO SHOP

18. Drawing Pictures.
19. Using filter tools.
20. Design a cover page for a book.

(AND)

UNIX AND SHELL PROGRAMMING PRACTICAL

1. Program for finding factorial
2. Program for generating Multiplication Table.
3. Finding Simple Interest.
4. Leap year checking .
5. Counting No, words, lines, characters.
6. Fibonacci Series.
7. Over time pay calculation.
8. Checking file access permission.
 - a. File Comparison.
 - b. Listing contents of directory
 - c. Checking Validity of user.
 - d. Implementing copy, move commend.
 - e. Counting number of lines before and after updating the file.
 - f. Removing directory.
 - g. Granting and revoking permissions for user, and others.
9. Sorting using GREP
10. Students mark List

PART IV - SKILL BASED ELECTIVE			
I SEMESTER			
SBE 1	PRINCIPLES OF INFORMATION TECHNOLOGY	11SEIT11	
Hrs / Week : 3	Hrs / Sem : 45	Hrs / Unit : 9	Credits : 2

UNIT I

Importance carriers – Fundamentals roles – System concepts – Components – resources – Overflow- recognizing information system

UNIT II

Computer categories – Computer Peripherals – application software- system software

UNIT III

Importance- trends- telecommunications model types of networks- media – carriers – processors – network topologies – channel characteristics

UNIT IV

Data concepts – types – managerial considerations – data base structures – development – creating a virtual company – using the internet

UNIT V

Business information system – transaction processing system – information system for managerial decision support – artificial intelligence technologies in business

TEXT BOOK:

1. Brien J.O 1997 Introduction to information system Edition McGraw Hill, 202

REFERENCE BOOK :

1. Satish Jain, 1997 'O' level made simple information technology BPB Publication New Delhi

II SEMESTER			
SBE 2	SYSTEM ARCHITECTURE		11SEIT21
Hrs / Week : 3	Hrs / Sem : 45	Hrs / Unit : 9	Credits : 2

UNIT I

Basic Computer Organization : Instruction Codes- Computer Registers – Computer Instructions-Timing and Control- Instruction Cycle

UNIT II

CPU : General Register Organization-Instruction Formats-Addressing Modes-Program Control

UNIT III

Computer Arithmetic : Hardware Implementation and Algorithm for Addition,Subtraction, Multiplication, Division- Booth Multiplication Algorithm

UNIT IV

Memory Organization Direct Memory Access- Memory Hierarchy-Main Memory-Auxiliary Memory-Associative Memory- Cache Memory- Virtual Memory

UNIT V

Advanced Processing : RISC, CISC Characteristics –Parallel Processing- Pipe Lining- Array Processors – Multi Processors

TEXT BOOK :

M. Morris Mano - Computer System Architecture -Third Edition

III SEMESTER			
SBE 3	FUNDAMENTALS OF MICROPROCESSOR		11SEIT31
Hrs / Week : 3	Hrs / Sem : 45	Hrs / Unit : 9	Credits : 2

UNIT I

Microprocessor, Microcomputers and Assembly Language: Microprocessors – Microprocessor instruction set and computer Languages – From large computers to Single Chip Micro Computer.

Introduction to 8085 and Assembly language Programming: 8085 Programming Model-Instruction Classification – Instruction, data forms and storage - how to write, assemble and execute a simple program – Overview of the 8085 instruction set – Writing and Handling an Assembly Language Program.

UNIT II

8085 Microprocessor Architecture and Memory Interfacing: The 8085 Micro processing unit [MPU] – Example of an 8085 based Microcomputers- Memory interfacing.

Introduction to 8085 Instructions: Data transfer operations –Arithmetic operations – Logic operations – Branch operations –Writing assemble programs – Debugging a program.

UNIT III

Programming Techniques with additional Instructions: Programming Techniques – Looping, Counting and Indexing – Additional data transfer 16-bit Arithmetic Instructions – Arithmetic operations related to memory – Logic operations – Rotate- compare, Dynamic Debugging.

Interrupts: 8085 Interrupts – Vectored Interrupts- Restart as Software Instruction.

UNIT IV

Stacks and Subroutines: Stack – Subroutine – Restart, Conditional call and Return instructions – Advanced subroutine Concepts – Micro Processor Controlled Traffic signal systems.

UNIT V

Difference between PC, PC-XT, PC-AT286, PC-AT386, PC-ATM486, PENTIUM, PENTIUM II, PENTIUM III, PENTIUM IV, RISC.

TEXT BOOK:

1. Microprocessor Architecture Programming and Applications with the 8085 – Ramesh S.Gaonkar -5th Edition.

IV SEMESTER			
SBE 4	DATA STRUCTURES		08SEIT41
Hrs / Week : 3	Hrs / Sem : 45	Hrs / Unit : 9	Credits : 2

UNIT-I INTRODUCTION

Pseudo code-The abstract data type-A model for an abstract data type-Searching-List searches-Hashed list searches.

UNIT-II LINKED LISTS

Liner list concepts –Linked list concepts-Linked list algorithms-Processing a linked list

UNIT-III STACKS AND QUEUES

Basic stacks operations-Stack linked list implementation-Stack applications-Queue operations-Queue linked list design.

UNIT-III TREES

Basic tree concepts-Binary trees-Binary tree traversals-Expression trees-General trees-Binary search trees-Heap definition-Heap structure-Basic heap algorithms-Heap data structures

UNIT-IV SORTING AND GRAPHS

General sort concepts-Quick sort-External sorts
Graphs- Graph storage structure-Networks.

TEXT BOOK:

Data structures A pseudo code approach with c++ Richard F.Gilberg & Eehrous
A.Forouzan,Thomsan Brooks\cole.

REFERENCE BOOKS :

- 1.Fundamentals of data structures Ellis Horopwits & Sartaj GalGotia publications.
- 2.Data structures & algorithm in Java third edition-Adam Drozdek.

V SEMESTER			
SBE 5	MANAGEMENT INFORMATION SYSTEM	08SEIT51	
Hrs / Week : 3	Hrs / Sem : 45	Hrs / Unit : 9	Credits : 2

UNIT I

Foundation concept : Information systems and technologies – Business Applications – Development and Management

UNIT II

Information technologies : Managing data sources – Technical foundations of Database Management .

UNIT III

Business applications : Functional Business Systems – Cross functional enterprise systems – Decision support in business

UNIT IV

Development process : Planning fundamentals – Implementation Challenges – Developing Business Systems – Implementing Business Systems

UNIT V

Management challenges : Managing Information Technology – Managing Global IT - Real world case studies

TEXTBOOK :

- 1.“Management Information System” Sixth edition, James A.O.Brien, TMH Chapters 1,2,3,4,5,8,9,10,12,Appendix A-1

REFERENCE BOOK :

- 1.“Management Information System “, Laudon & Laudon, Nineth Edition, PHI

VI SEMESTER			
SBE 6	INTERNET SECURITY		08SEIT61
Hrs / Week : 3	Hrs / Sem : 45	Hrs / Unit : 9	Credits : 2

UNIT I - Introduction to E – commerce

Scope of E- commerce and definition – Internet –.3 commerce – Electronic markets- Electronic data Exchange –Business Strategy in an Electronic age: The value chain-supply chain- porters value chain model- Inter Organisational value chain-competitive advantages using e.-commerce.

UNIT II

Strategic implications of IT-Business –Strategy formulation and implementation planning –e-commerce implementation –e-commerce evaluation . Case studies: airline booking system –web booking system-competitive outcomes.

UNIT III

Business to business Electronic Commerce:Inter organizational Transactions – Electronic Markets- Advantages and disadvantages of Electronic Markets and its future, Electronic Data Interchange(EDI): Definitions: Examples –EDI Technology- EDI Communications –Implementation –EDI Agreements –security.

UNIT IV

Business to Consumer electronic Commerce: The e-shop- e-commerce technologies- consumer e-commerce advantages and Disadvantages-Inter concepts-TCP\IP –Uses of Internet –Internet Age Systems.

UNIT V

A page on the web –HTML Basics –Client side server side scripting. The elements of e- commerce :Internet e- commerce security- A web site Evaluation Model –Internet Bookshops- Internet Banking –Online share dealing- e—diversity- Technology Adoption.

TEXT BOOK :

E.Commerce logistics and Fulfillment – Debroah L.bayles-Pearson Education Asis-Addision Wesley Longman(Singapore) Pte. Ltd.

REFERENCE BOOKS :

1. E-Commerce Logistics and Fulfillment –Deborah L.Bayles- Pearson Education Asis - Addision Wesley Longman (Singapore) Pte. Ltd.
2. Managing your e-commerce business-brenda Kienan -2nd edition- prentice Hall of India ,New Delhi- 2001

PART IV - NON MAJOR ELECTIVE

III SEMESTER

NME 1	OFFICE AUTOMATION	11NEIT31
Hrs / Week : 3	Hrs / Sem : 45	Hrs / Unit : 9
		Credits : 2

UNIT 1 - Introduction of Office 2000

Exploring common features in Office. Working with files. Editing in Office 2000, Selecting, moving and Copying – Fonts and font styles. Mastering the basics of Word Creating Word documents – Editing document Texts – applying Text enhancements. Aligning and Formatting, adding Lists, Numbers, Symbols, Date and time, Replacing and checking text, getting into print.

UNIT II - Word

Applying advanced formatting techniques : Formatting pages. Working with Columns, Constructing high quality tables, Creating outlines in Word. Working with complex Documents

UNIT III

Managing data with Word, creating customized Merge Documents, Publishing online forms, adding reference to documents, working together on documents.

UNIT IV - Excel

Creating Excel Worksheet : Entering and editing Cell entries, Working with numbers, changing worksheet layout, other formatting options, Printing in Excel, using functions and references, naming ranges, creating easy to understand charts, using custom and special effects, using financial and statistical functions. Tracking and analyzing data with Excel, auditing Worksheet.

UNIT V - Power Point

Creating Power Point presentation : Creating a Basic Presentation, building presentations, modifying visual elements, formatting and checking text, adding objects, applying transitions, animations effects and linking, preparing handouts, taking the show on the road.

TEXT BOOK :

1. Gini Courter & Anette Marquis – MICROSOFT OFFICE 2000 No Experience required, BPB Publications.

REFERENCE BOOK :

1. Stephn L. Nelson – Office 2000 The Complete Reference, Tata McGraw Hill publishing Company Limited.

IV SEMESTER			
NME 2	C PROGRAMMING	11NEIT41	
Hrs / Week : 3	Hrs / Sem : 45	Hrs / Unit : 9	Credits : 2

UNIT I

Identifiers & Keyword – Data types – Constants– Variables –Input statement – Output Statement –Operators – Expressions – Assignment statement – IF, IF ELSE, SWITCH – Loop Statement – FOR Loop, WHILE LOOP , DO WHILE LOOP – Break Statement – GoTo Statement.

UNIT II

Function & Program Structure – Defining Function – Return Statement – Types of Function – Argument – Local & Global Variable – Scope of the Variable – Recursion

UNIT III

Array Notation – Array Declaration – Initialization – Processing with Array – Array And Functions – Multidimensional array character array – Pointer decalaration – Pointer Arithmetic – Array of Pointers – Pointers & Functions.

UNIT IV

Preprocessors – Macros – Header Files – Standard Functions –Structures– Union – Bit fields – Typedef – Enumeration.

UNIT V

Structures – Declaration of structure – Members – Accessing the members of a structure – Arrays of structures – Pointer to structure

TEXT BOOK :

1. Programming with C by E.Balagurusamy