

**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.C.A.

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.C.A. (BACHELOR OF COMPUTER APPLICATIONS) (2010 - 2013)

COURSE STRUCTURE (CBCS)

I SEMESTER				II SEMESTER			
P	COURSE	H/W	C	P	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 – even semester

B.C.A. (BACHELOR OF COMPUTER APPLICATIONS) (2010 - 2013)										
DISTRIBUTION OF CREDITS, NO. OF PAPERS & MARKS										
PART	COURSE		SEM.	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.C.A. (BACHELOR OF COMPUTER APPLICATIONS) - (2010 - 2013)**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 & Translation	11ULAR11					
II	EN 1	Practical Course in Listening and Speaking	11ULEN11A	6	3	40	60	100
III	C 1	Fundamentals of Computers	11UCCA11	4	4	25	75	100
	CP I	Core Practical - I	--	2	--	EXAM II SEM		
	A - 1	Office Automation	11UACA11	4	4	25	75	100
	A P 1	Allied Practical - I	--	2	--	EXAM II SEM		
IV	SBE 1	Basic Mathematics	11SECA11	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 & Translation	11ULAR21					
II	EN 2	Prose, Poetry and Composition	11ULEN21A	6	3	25	75	100
III	C 2	Principles of Programming in C	11UCCA21	4	4	25	75	100
	CP I	Core Practical - I	11UCCA2P	2	3	40	60	100
	A 2	Multimedia Tools	11UACA21	4	4	25	75	100
	A P I	Allied Practical - I	11UACA2P	2	2	40	60	100
IV	SBE 2	Quantitative Aptitude	11SECA21	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 Technology	11UCCA31	6	5	25	75	100
	C4	C++ programming	11UCCA32	5	5	25	75	100
	C5	Web programming	11UCCA33	5	4	25	75	100
	CP II	Core Practical - II	--	2	--	EXAM IV SEM		
	A 3	Desk Top Publishing	11UACA31	4	4	25	75	100
	A P II	Allied Practical - II	--	2	--	EXAM IV SEM		
IV	SBE 3	RDBMS	11SECA31	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.C.A. (BACHELOR OF COMPUTER APPLICATIONS) - (2010 - 2013)**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	Programming in Java	11UCCA41	6	5	25	75	100
	C7	Computer System Architecture	11UCCA42	5	5	25	75	100
	C 8	Operating Systems	11UCCA43	5	4	25	75	100
	CP II	Core Practical - II	11UCCA4P	2	3	40	60	100
	A 4	Shell Programming	11UACA41	4	4	25	75	100
	A II P	Allied Practical - II	11UACA4P	2	2	40	60	100
IV	SBE 4	Computer Networks	11SECA41	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 programming	11UCCA51	5	5	25	75	100
	C 10	Software Engineering	11UCCA52	5	4	25	75	100
	C 11	Data structures	11UCCA53	5	4	25	75	100
	CE 1	A) ORACLE OR	11UECA5A	4	4	25	75	100
		B) Active Server Pages	11UECA5B					
	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	System Analysis and Design	11SECA51	3	2	25	75	100
	TOTAL				30	19	125	375
VI SEMESTER								
III	C 12	Asp.Net	11UCCA61	5	5	25	75	100
	C 13	Computer Graphics and Multimedia	11UCCA62	5	4	25	75	100
	CE 2	A) C# Programming OR	11UECA6A	4	4	25	75	100
		B) PHP	11UECA6B					
	P	Project	11UPCA61	5	5	--	100	100
	CP III	Core Practical - III	11UCCA6P1	3	4	40	60	100
	CP IV	Core Practical - IV	11UCCA6P2	3	4	40	60	100
	CE P	Core Elective Practical	11UECA6P	2	2	40	60	100
IV	SBE 6	E-Commerce	11SECA61	3	2	25	75	100
	TOTAL				30	30	220	580

PART I & II (2010 - 2013)

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

DEPT. OF B.C.A. CBCS SYLLABUS - B.C.A. (2010 - 2013)								
PART III - CORE, CORE ELECTIVE & PROJECT (FOR B.C.A. MAJOR)								
SEM	P	TITLE OF THE PAPER	S.CODE	H/ W	C	MARKS		
						I	E	T
I	C1	Fundamentals of Computers	11UCCA11	4	4	25	75	100
	CP	Core Practical - I	--	2	--	EXAM II SEM		
II	C2	Principles of Programming in C	11UCCA21	4	4	25	75	100
	CP	Core Practical - I	11UCCA2P	2	3	40	60	100
III	C3	Digital Technology	11UCCA31	6	5	25	75	100
	C4	C++ Programming	11UCCA32	5	5	25	75	100
	C5	Web Programming	11UCCA33	5	4	25	75	100
	CP	Core Practical - II	--	2	--	EXAM IV SEM		
IV	C6	Programming in Java	11UCCA41	6	5	25	75	100
	C7	Computer System Architecture	11UCCA42	5	5	25	75	100
	C8	Operating Systems	11UCCA43	5	4	25	75	100
	CP	Core Practical - II	11UCCA4P	2	3	40	60	100
V	C9	GUI programming	11UCCA51	5	5	25	75	100
	C10	Software Engineering	11UCCA52	5	4	25	75	100
	C11	Data Structures	11UCCA53	5	4	25	75	100
	CE1	A) ORACLE OR	11UECA5A	4	4	25	75	100
		B) Active Server Pages	11UECA5B					
	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	ASP -Net	11UCCA61	5	5	25	75	100
	C13	Computer Graphics and Multimedia	11UCCA62	5	4	25	75	100
	CE2	A) C# Programming OR	11UECA6A	4	4	25	75	100
		B) PHP	11UECA6B					
	P	Project	11UPCA61	5	5	--	100	100
	CP	Core Practical - III	11UCCA6P1	3	4	40	60	100
		Core Practical - IV	11UCCA6P2	3	4	40	60	100
CEP	Core Elective Practical	11UECA6P	2	2	40	60	100	
TOTAL				102	87	575	1525	2100

DEPT. OF B.C.A. CBCS SYLLABUS (2010 - 2013)								
PART III - ALLIED I - OFFICE TOOLS & SHELL PROGRAMMING (FOR I.T. & B.C.A.MAJORS)								
SEM	P	TITLE OF THE PAPER	S.CODE	H/W	C	MARKS		
						I	E	T
I	1	Office Automation	11UACA11	4	4	25	75	100
		Allied Practical - I	--	2	--	EXAM II SEM		
II	2	Multimedia Tools	11UACA21	4	4	25	75	100
		Allied Practical - I	11UACA2P	2	2	40	60	100
III	3	Desk Top Publishing	11UACA31	4	4	25	75	100
		Allied Practical - II	--	2	--	EXAM IV SEM		
IV	4	Shell Programming	11UACA41	4	4	25	75	100
		Allied Practical - II	11UACA4P	2	2	40	60	100
TOTAL				24	20	180	420	600
PART IV - SKILL BASED ELECTIVE (FOR B.C.A. MAJORS)								
I	1	Basic Mathematics	11SECA11	3	2	25	75	100
II	2	Quantitative Aptitude	11SECA21	3	2	25	75	100
III	3	RDBMS	11SECA31	3	2	25	75	100
IV	4	Computer Networks	11SECA41	3	2	25	75	100
V	5	System Analysis and Design	11SECA51	3	2	25	75	100
VI	6	E-Commerce	11SECA61	3	2	25	75	100
TOTAL				18	12	150	450	600
PART IV - NON MAJOR ELECTIVE (FOR OTHER MAJORS)								
III	1	Desk Top Publishing	11NECA31	3	2	25	75	100
IV	2	Internet & HTML	11NECA41	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			
C 1	FUNDAMENTALS OF COMPUTERS	11UCCA11	
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	PRINCIPLES OF PROGRAMMING IN C		11UCCA21
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 declaration – 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)	11UCCA2P
Hrs / Week : 2	Hrs / Sem : 30	Credits : 3

PRINCIPLES OF PROGRAMMING IN C 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 TECHNOLOGY		11UCCA31
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 K map – sum of products method - Product of sums.

UNIT III

Combinational Logic

Encoder, Decoder, 16 – 1 multiplexers, 1 – 16 De multiplexers, Half adder, Full adder, Half Subtractor and Full subtractor.

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	C++ PROGRAMMING	11UCCA32	
Hrs / Week : 5	Hrs / Sem : 75	Hrs / Unit : 15	Credits : 5

UNIT I - Classes and objects

Introduction – structures in C – structures in C++ – declaring objects – The public Keyword – defining member functions – characteristics of member function – out side member function inline – Rules for inline functions – data hiding or encapsulation – classes, objects and memory – static variable and functions – static object – Array of objects

UNIT II - Constructors and Destructors

Introduction – Constructors and destructors – Characteristics of constructors and destructors – Types of constructors – calling constructors and destructors – qualifier and nested classes

UNIT III - Operator overloading and Inheritance

Introduction – the keyword operator – overloading unary operator – overloading binary operators – overloading with friend function – type conversion – Rules for overloading operators - Inheritance – access specifiers and simple inheritance – Protected data with private inheritance – types of inheritance – single inheritance – Multilevel inheritance – multiple inheritance – hierarchical inheritance – hybrid inheritance.

UNIT IV - Pointers and Arrays

Introduction – pointers declaration – pointer to class – pointer to object – the this pointer – pointer to derived classes and base classes – arrays – characteristics of arrays – initialization of arrays using functions – arrays of classes – binding in C++ – pointers to derived classes objects.

UNIT V - Virtual functions and files

Virtual function – rules for virtual function – pure virtual functions – virtual functions in derived classes – file stream classes – steps of file operations – Checking for errors – finding end of a file – file opening modes – file pointers and manipulators – manipulators with arguments – sequential read and write operators – binary and ASCII files – random access operation.

TEXT BOOK :

1. Object Oriented Programming with C++ by E. Balagurusamy.

III SEMESTER			
C 5	WEB PROGRAMMING		11UCCA33
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	PROGRAMMING IN JAVA		11UCCA41
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 java2 – R. Rajaram, SCITECH Publications (India) Pvt Ltd, Chennai 2001

REFERENCE BOOKS:

1. Java2 – Complete Reference, Tata McGraw Hill Publications
2. Thomaswu – An Introduction to Object Oriented Programming with Java, Tata McGraw Publications, 2001

IV SEMESTER			
C 7	COMPUTER SYSTEM ARCHITECTURE	11UCCA42	
Hrs / Week : 5	Hrs / Sem : 75	Hrs / Unit : 15	Credits : 5

UNIT I

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

UNIT II

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

UNIT III

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

UNIT IV

I/O and Memory Organization : I/O Interface –Asynchronous Data Transfer – Modes of I/O Transfer- Priority Interrupt-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- Vector Processing – Array Processors – Multi Processors – InterConnections Structures

TEXT BOOK :

1. M. Morris Mano - Computer System Architecture -Third Edition

Unit I - Chapters - 5.1 to 5.5, 7.1 to 7.2
Unit II - Chapters - 8.1 to 8.5, 8.7
Unit III - Chapters - 10.1 to 10.5
Unit IV - Chapters - 11.2 to 11.6, 12.1 to 12.6
Unit V - Chapters - 8.8,9.1,9.6,9.7, 13.1 and 13.

IV SEMESTER			
C 8	OPERATING SYSTEMS		11UCCA43
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:

1. 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 - Dhamdhare- Tata Mcgraw- Hill Edition.

III & IV SEMESTERS		
CP II	CORE PRACTICAL - II (Exam end of IV Sem)	11UCCA4P
Hrs / Week : 2	Hrs / Sem : 30	Credits : 3

PROGRAMMING IN JAVA PRACTICAL

- 1 Write a java program using class
- 2 Write a java program using inheritance
- 3 Write a java program using interfaces
- 4 Write a java program using packages
- 5 Write a java program to create a user defined exception
- 6 Write a program using threads
- 7 Create an applet program to draw multiple shapes
- 8 Create an applet program using scroll bar
- 9 Create a java programming using Files

V SEMESTER			
C 9	GUI PROGRAMMING		11UCCA51
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 The
2. Complete Reference Visual Basic 6 – Noel Jerke - Tata Mcgraw - Hill Edition

V SEMESTER			
C10	SOFTWARE ENGINEERING		11UCCA52
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 BOOKS:

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

V SEMESTER			
C 11	DATA STRUCTURES		11UCCA53
Hrs / Week : 5	Hrs / Sem : 75	Hrs / Unit : 15	Credits : 4

UNIT-1 INTRODUCTION

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

UNIT-2 LINKED LISTS

Liner list concepts –Linked list concepts-Linked list algorithms-Processing a linked list -Complex linked list structures.

UNIT-3 STACKS AND QUEUES

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

UNIT-4 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-Heap algorithm.

UNIT-5 SORTING AND GRAPHS

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

TEXT BOOK:

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

Chapters 1,2.1,2.3,2.4,3.1-3.4,3.6,4.1-4.3,5.1,5.2,7.1-7.5,8.1,9.1-9.5,11.1,11.4(Quick sort only),1..6,12.1-12.5

REFERENCE BOOKS :

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

V SEMESTER			
CE 1A	ORACLE		11UECA5A
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.

V SEMESTER			
CE 1B	ACTIVE SERVER PAGES		11UECA5B
Hrs / Week : 4	Hrs / Sem : 60	Hrs / Unit : 12	Credits : 4

UNIT I

Active server page model – script - setting the primary scripting language - understanding objects - application - request – response - server - sessions objects.

UNIT II

Understanding components - ad rotator component - browser capabilities component - content linking – counters - page counter - permission checker - active x component.

UNIT III

Working with html forms-retrieving form data-using text boxes and areas-using form tools-cookies.

UNIT IV

Working with files and file system - copying, moving and deleting files-folders-drives.

UNIT V

Working with connections and data sources-connection object.

TEXT BOOK :

1. Practical Asp, Ivan Bayross, Bpb Publications
First edition- chapters 1, 2, 3, 4, 5, 6, 7, 8 and 9.

VI SEMESTER			
C 12	ASP .NET		11UCCA61
Hrs / Week : 5	Hrs / Sem : 75	Hrs / Unit : 15	Credits : 4

UNIT I

The .NET framework – The .NET programming framework – VB.NET , C#, and the NET language – the common language runtime – the .NET class library – ASP .NET – visual studio .NET

Learning the .NET language – Data types – declaring variables – scope and accessibility – variable operations – object based manipulation – conditional structures – loop structures – functions and subroutines

UNIT II

ASP .NET Applications – ASP .NET Applications – code behind the global ASP application file – understanding ASP .NET classes – ASP .NET configuration

Web form fundamentals – a simple page Applet – improving the currency converter – a deeper look at HTML control classes – the page class – assessing HTML server controls.

UNIT III

Web controls – stepping up to web controls – web control classes – auto post back and web control events – a simple web page applet – assessing web controls

Using visual studio .NET – the promise of Visual Studio .NET – starting a visual studio .NET project – the web form designer – writing code – visual studio .NET debugging – working without Visual Studio .NET

UNIT IV

State management – the problem of state – view state – transferring Information – custom cookies – session state – session state configuration – application state

Tracing and logging – logging exceptions – error pages – page tracing

UNIT V

Component based programming – why use components – creating a simple component – properties and state – database components – a simple database component using COM components

TEXT BOOK :

1. The complete reference ASP .NET , Mathew Macdonald, TMH 2002

REFERENCE BOOK :

1. Microsoft ASP. NET Step by step , G. Andrew Duthie, PHI

VI SEMESTER			
C13	COMPUTER GRAPHICS AND MULTIMEDIA	11UCCA62	
Hrs / Week : 5	Hrs / Sem : 75	Hrs / Unit : 15	Credits : 5

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		11UECA6A
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, fore ach 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 – Meathod Overloading –Polymorphism : Method overloading, Method overriding – Constants , fields, Indexes and properties

UNIT V

Delgate Declaration and Instantiation- Events – Exceptions – Preprocessor Directives – C# Documentation Comments – Generationg c# Documentation

TEXT BOOK :

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

VI SEMESTER			
CE 2B	PHP		11UECA6B
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	11UPCA61
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)	11UCCA6P1
Hrs / Week : 3	Hrs / Sem : 45	Credits : 4

GUI PROGRAMMING 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.

V & VI SEMESTERS		
CP IV	CORE PRACTICAL - IV (Exam end of VI Sem)	11UCCA6P2
Hrs / Week : 3	Hrs / Sem : 45	Credits : 4

GRAPHICS AND MULTIMEDIA PRACTICAL

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)	11UECA6P
Hrs / Week : 2	Hrs / Sem : 30	Credits : 2

CORE ELECTIVE : 1A - ORACLE 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

(OR)

CORE ELECTIVE : 1B - ACTIVE SERVER PAGES

1. Demonstration of Cookies.
2. Write ASP code to store user name & password into session.
3. Write ASP code to find no of visitors for the web site.
4. Demonstration of Query string.
5. Write ASP code to insert records into the table.
6. Write ASP code to check whether username & password are valid or invalid.
7. Write ASP code to modify the records in the table.
8. Write ASP code to delete records from the table.
9. Demonstration of events.

(AND)

CORE 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)

CORE 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	OFFICE AUTOMATION		11UACA11
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	MULTIMEDIA TOOLS		11UACA21
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		
API	ALLIED PRACTICAL - I (Exam end of II Sem)	11UACA2P
Hrs / Week : 2	Hrs / Sem : 30	Credit : 2

OFFICE AUTOMATION 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)

MULTIMEDIA 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		11UACA31
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 Power clip 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, and 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	SHELL PROGRAMMING	11UACA41	
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)	11UACA4P
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)

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 commends.
 - 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	BASIC MATHEMATICS	11SBECA1
Hrs / Week : 3	Hrs / Sem : 45	Hrs/Unit : 9
		Credits : 2

UNIT I

NUMBER SYSTEMS AND EQUATIONS – Numbers – Natural - Whole – Rational – Irrational Real – Algebraic expression – factorisation – Equations – linear equations with two or three unknowns – solutions of quadratic equations – permutation – combinations – binomial expansion.

UNIT II

THEORY OF INDICES – Indices – fractional indices – Logarithms – Properties – laws of Logarithms – Common logarithms – Arithmetic progression - n^{th} term - sum of n terms.

UNIT III

ANALYTICAL GEOMETRY – Distance between two points in a plane slope of a straight line – equation of a straight line – point of intersection of two lines – applications (1) Demand and Supply (2) Cost Output (3) Break – even analysis.

UNIT IV

MATRICES – Basic concepts – matrix addition – scalar multiplication – Multiplication of Matrix – inverses of a matrix – solution through linear equations – matrix method.

UNIT V

COMMERCIAL ARITHMETIC – Percentages – ratio and proportion – simple interest – compound interest – discount – banker's discount - true discount.

TEXT BOOK :

1. Business Mathematics – D.C. Sancheti and V.K.Kapoor Publisher: Sultan Chand & Sons, New Delhi.

REFERENCE BOOK :

1. A text book of Business Mathematics by G.K. Ranganath – Himalaya Publishing House, Delhi.

II SEMESTER			
SBE 2	QUANTITATIVE APTITUDE		11SECA21
Hrs / Week : 3	Hrs / Sem : 45	Hrs/Unit : 9	Credits : 2

UNIT I

Problem on numbers - Problem on ages - Percentage – Profit and loss

UNIT II

Time and distance – Time and work - Problems on trains – Partnership

UNIT III

Probability - Boats and streams - Allegation or mixture

UNIT IV

Area – Volume – Surface Areas – Races and games

UNIT V

Clocks – stocks and shares – Heights and distance

TEXT BOOK :

1. Quantitative Aptitude R. S. Aggarwal – S. Chand Publications.

III SEMESTER			
SBE 3	RDBMS		11SECA31
Hrs / Week : 3	Hrs / Sem : 45	Hrs / Unit : 9	Credits : 2

UNIT I

Introduction : Purpose of Data base Systems – view of data – data models – data base models – data base languages – transaction management – storage management – data base administrator – data base users

Entity – relationship model; Basic concepts – design issues – mapping cardinalities – keys – ER Diagrams – Weak entity sets

UNIT II - Relational Model

Structure of relational databases – relational Algebra – the tuple relational calculus – the domain relational calculus – extended relational Algebra operations –Modification of the database – views .

UNIT III - Storage and File Structure

Overview of physical storage media – magnetic disks – RAID – storage access – file organization – organization of records in files – data directory storage – storage structures for object – oriented data base .

Indexing and Hashing : Basic concepts – oriented indices – static hashing – dynamic hashing – comparison of ordered indexing and hashing .

UNIT IV - Relational data base Design

Pitfalls in Relational data base design – decomposition – normalization using functional dependencies – normalization using multi – valued dependencies .

UNIT V - SQL within PL/SQL

SQL structures – DML in PL/SQL – GRANT, REVOKE, and privileges – Transaction control .

TEXT BOOKS:

1. Database system concepts –Abraham Silberschatz hentry F.Korth, L.Su.Dershan. III Edition, McGraw Hill companies, INC New York - Chapters: 1, 2, 3,5,6,7.

REFERENCE BOOKS:

1. Database Management systems – Alexis Leon.
2. commercial Application Development using Oracle Developer 2000 Invan Bayross.

IV SEMESTER			
SBE 4	COMPUTER NETWORKS		11SECA41
Hrs / Week : 3	Hrs / Sem : 45	Hrs / Unit : 9	Credits : 2

UNIT I

Introduction – Evolution- need for networks- transmissions- analog and digital transmission. Communication modes: Simplex, Half and full Duplex modes.

UNIT II

Network classification – topological, geographical and ownership based classifications. Switching and routing- Message, Circuit switching and packet switching.

UNIT III

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

UNIT IV

LAN standards: 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 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			
SBE 5	SYSTEM ANALYSIS AND DESIGN		11SECA51
Hrs / Week : 3	Hrs / Sem : 45	Hrs / Unit : 9	Credits : 2

UNIT I

System Concepts – Definition – Characteristics of a System – Elements of a System – Types of Systems – The System Development Life Cycle – The Role of System Analyst : Definition – Academic and Personnel Qualifications – Multifaceted Role of the Analyst.

UNIT II

System Analysis – System Planning and Initial Investigation: Bases for Planning in System Analysis – Initial Investigation: Needs Identification – Determining User's Information Requirements – Information Gathering – What kinds of information do we need? – Where does information originates? – Information Gathering Tools.

UNIT III

Tools of Structured Analysis : DFD – Data Dictionary – Decision Tree – Structured English – Decision Tables - Feasibility Study - Feasibility considerations – Economic – Technical – Behavioral – Steps in Feasibility Analysis - Cost Benefit Analysis- Cost and Benefit Categories – Classification of cost and benefits.

UNIT IV

System Design – The Process of Design : Logical and Physical Design – Design Methodologies - Structured Design – Form Driven Methodology – The IPO Charts – Input Design : Input data – Input media and devices - Output Design – Forms Design – Classification of Forms – Requirements of Form Design – Types of Forms – Layout Considerations – Forms Control.

UNIT V

System Implementation – System Testing and Quality Assurance – The Test Plan – System Testing - Types of System Tests - Quality Assurance – Quality Assurance Goals in the Systems Life Cycle - Implementation and Software Maintenance - Conversion – Post Implementation Reviews – Software Maintenance.

Hardware and Software Selection - Types of Software – Procedure for Hardware/Software Selection – Major phases in Software Selection – Criteria for Software Selection.

Text Book:

Elias M.Awad, "Systems Analysis And Design", Galgotia Publications Private Ltd, New Delhi, Second Edition, 1997

Reference Book:

Lee, "Introducing System Analysis and Design" – Volume I and II, Galgotia BookSource, The National Computing Center Limited, New Delhi, 1994.

VI SEMESTER			
SBE 6	E – COMMERCE		11SECA61
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 :

1. 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	DESK TOP PUBLISHING	11NECA31
Hrs / Week : 3	Hrs / Sem : 45	Hrs / Unit : 9
		Credits : 2

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. CorelDraw8: 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			
NME 2	INTERNET & HTML		11NECA41
Hrs / Week : 3	Hrs / Sem : 45	Hrs / Unit : 9	Credits : 2

UNIT I

Introduction to internet-computers in business networks-internet-electronic mail-resource sharing-gopher-www-usenet-telnet-bulletin services-wide area information service.
Internet explorer-Netscape navigator

UNIT II

Designing a home page-history of html-html generations-html document-anchor tag-hyper links-sample html documents-header and body section-designing the body-tab setting-image and picture-embedding PNG format images.

UNIT III

List unordered list-ordered list-nested list-table creation-Cell spacing and spanning-coloring cells - rows and columns specification.

UNIT IV

Frameset-definition-frame definition-nested frame sets.

UNIT V

Forms action attributes-method attributes-encype attributes-dropdown list.

TEXT BOOK:

1. World wide web design with html-c.Xavier