

B.Sc. (Computer Science)
COURSE STRUCTURE (CBCS)
(Applicable for students admitted in June 2015 onwards)

ALLIED I – Computer Application				ALLIED II – Computer Application					
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 – 3	4	4		
	Core – 2	3	4		Core – 4	3	4		
	Core Practical - I*	3	-		Core Practical - I*	3	3		
	Allied I	3	4		Allied II	3	4		
	Allied Practical - I*	3	-		Allied Practical - I*	3	2		
IV	Environmental Studies	2	1	IV	Islamic Value Education	2	1		
				Value Education					
TOTAL			30	19	TOTAL			30	24
III SEMESTER				IV SEMESTER					
III	Core – 5	5	4	III	Core – 8	5	4		
	Core – 6	5	4		Core – 9	5	4		
	Core – 7	5	4		Core – 10	5	4		
	Core Practical – II *	3	-		Core Practical – II *	3	3		
	Allied III	3	4		Allied IV	3	4		
	Allied Practical – II *	3	-		Allied Practical – II*	3	2		
IV	Skill Based Elective - 1	3	2	IV	Skill Based Elective - 2	3	2		
	Non Major Elective -1	3	2		Non Major Elective - 2	3	2		
				V	Extension Activities	--	1		
TOTAL			30	20	TOTAL			30	26
V SEMESTER				VI SEMESTER					
III	Core – 11	6	5	III	Core – 14	6	5		
	Core – 12	5	5		Core – 15	5	5		
	Core – 13	5	5		Core – 16 – Project	5	5		
	Core Practical – III*	3	-		Core Practical – III*	3	3		
	Core Practical – IV*	3	-		Core Practical - IV*	3	3		
	Core Elective – 1	5	6		Core Elective – 2	5	6		
	Core Elective Practical *	3	-		Core Elective Practical *	3	3		
TOTAL			30	21	TOTAL			30	30

* Practical Examination – End of even semester

G1-S

B.Sc. Computer Science (2015 and Onwards)						
DISTRIBUTION OF CREDITS, NO. OF PAPERS & MARKS						
Part	Course	Semester	Hrs.	Credits	No. of Papers	Marks
I	Tamil / Arabic	I to II	12	6	2	200
II	English	I to II	12	6	2	200
III	Core + Core Practical	I to VI	95	77	15 + 4	1900
	Core Elective + CE Practical + Project	V & VI	21	20	2 + 1 + 1	400
	Allied + Practical	I to IV	24	20	4 + 2	600
IV	Environmental Studies	I	2	1	1	100
	Social Value Education	II	2	1	1	100
	Skill Based Elective	III & IV	6	4	2	200
	Non Major Elective	III & IV	6	4	2	200
V	Extension Activities	I to IV	--	1	1 (No Exam)	100
TOTAL			180	140	40	4000

SEMESTER WISE DISTRIBUTION OF HOURS

Part	I	II	III				IV			Total
Sem	T/A	ENG	Core + Pract	CE	PRO	Allied+ Pract	SBE	NME	VE/ES	
I	6	6	7 + 3	-	-	3 + 3	-	-	2	30
II	6	6	7 + 3	-	-	3 + 3	-	-	2	30
III	-	-	15 + 3	-	-	3 + 3	3	3	-	30
IV	-	-	15 + 3	-	-	3 + 3	3	3	-	30
V	-	-	16 + 6	5 + 3	-	-	-	-	-	30
VI	-	-	11 + 6	5 + 3	5	-	-	-	-	30
TOT	12	12	71+24=95	10+6=16	5	12+12=24	6	6	4	180

B.Sc. Computer Science - CBCS Syllabus

(Applicable for students admitted in June 2015 onwards)

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	,f;fhyj; jkpo;	15UTAL11	6	3	25	75	100
	AR 1	Applied Grammar and Translation - I	15UARL11					
II	EN 1	Prose, Poetry and Remedial Grammar - I	15UENL11	6	3	25	75	100
III	C1	C Programming	15UCSC11	4	4	25	75	100
	C2	Discrete Mathematics	15UCSC12	3	4	25	75	100
	CP-1	Computer Science Core Practical – I	-	3	0	Examination II Semester		
	AI-1	Office Automation	15UCAA11	3	4	25	75	100
	AI-P	Allied I - Practical	-	3	0	Examination II Semester		
IV	ES	Environmental Studies	15UEVS11	2	1	25	75	100
TOTAL				30	19	150	450	600
II SEMESTER								
I	TA 2	rkaj; jkpo;	15UTAL21	6	3	25	75	100
	AR 2	Applied Grammar and Translation - II	15UARL21					
II	EN 2	Prose, Poetry and Remedial Grammar - II	15UENL21	6	3	25	75	100
III	C3	C++ Programming	15UCSC21	4	4	25	75	100
	C4	Digital Principles & Applications	15UCSC22	3	4	25	75	100
	CP-1	Computer Science Core Practical – I	15UCSC2P	3	3	40	60	100
	AI-2	Web Graphic Design	15UCAA21	3	4	25	75	100
	AI-P	Allied I – Practical	15UCSA2P	3	2	40	60	100
IV	VE	Value Education – I	15USVE2A	2	1	25	75	100
		Value Education - II	15USVE2B					
TOTAL				30	24	230	570	800

B.Sc. Computer Science - CBCS Syllabus

(Applicable for students admitted in June 2015 onwards)

TITLE OF THE PAPERS, CREDITS & MARKS

III SEMESTER								
P	SUB	Title of the paper	S.CODE	H/W	C	MARKS		
						I	E	T
III	C5	Java Programming	15UCSC31	5	4	25	75	100
	C6	MicroProcessor	15UCSC32	5	4	25	75	100
	C7	Web Design	15UCSC33	5	4	25	75	100
	CP-II	Computer Science Core Practical – II	-	3	-	Examination IV Semester		
	AII-1	Unix and Shell Programming	15UCSA31	3	4	25	75	100
	AII-P	Allied II - Practical	-	3	-	Examination IV Semester		
IV	SBE1	Operations Research	15UCSS31	3	2	25	75	100
	NME1	Choose from the list	-	3	2	25	75	100
TOTAL				30	20	150	450	600
IV SEMESTER								
III	C8	Data Structures in C	15UCSC41	5	4	25	75	100
	C9	Computer Graphics	15UCSC42	5	4	25	75	100
	C10	Operating Systems	15UCSC43	5	4	25	75	100
	CP-II	Computer Science Core Practical – II	15UCSC4P	3	3	40	60	100
	AII-2	Active Server Pages	15UCSA41	3	4	25	75	100
	AII-P	Allied II – Practical	15UCSA4P	3	2	40	60	100
IV	SBE2	Quantitative Aptitude	15UCSS41	3	2	25	75	100
	NME2	Choose from the list	-	3	2	25	75	100
V	EX	Extension Activities (Choose from the list)	-	--	1	--	100	100
TOTAL				30	26	230	670	900

B.Sc. Computer Science - CBCS Syllabus

(Applicable for students admitted in June 2015 onwards)

TITLE OF THE PAPERS, CREDITS & MARKS

V SEMESTER								
P	SUB	Title of the paper	S.CODE	H/W	C	MARKS		
						I	E	T
III	C11	J2EE	15UCSC51	6	5	25	75	100
	C12	Software Engineering	15UCSC52	5	5	25	75	100
	C13	PHP	15UCSC53	5	5	25	75	100
	CP-III	Computer Science Core Practical – III	-	3	-	Examination VI Semester		
	CP-IV	Computer Science Core Practical – IV	-	3	-	Examination VI Semester		
	CE1	A) RDBMS with SQL Server	15UCSE5A	5	6	25	75	100
		B) RDBMS with ORACLE	15UCSE5B					
CE-P	Computer Science Core Elective Practical	-	3	-	Examination VI Semester			
TOTAL				30	21	100	300	400
VI SEMESTER								
III	C14	Data Communications and Networking	15UCSC61	6	5	25	75	100
	C15	VB.Net	15UCSC62	5	5	25	75	100
	C16	Project	15UCSP61	5	5	-	100	100
	CP-III	Computer Science Core Practical – III	15UCSC6P1	3	3	40	60	100
	CP-IV	Computer Science Core Practical – IV	15UCSC6P2	3	3	40	60	100
	CE2	A) C # Programming	15UCSE6A	5	6	25	75	100
		B) PC Hardware and Trouble Shooting	15UCSE6B					
CE-P	Computer Science Core Elective Practical	15UCSE6P	3	3	40	60	100	
TOTAL				30	30	195	505	700

B.Sc. Computer Science CBCS Syllabus
PART I AND II SUBJECTS - TITLE OF THE PAPERS,
CREDITS & MARKS
(Applicable for students admitted in June 2015 and onwards)

TITLE OF THE PAPERS, CREDITS & MARKS

GROUP I COURSES (ONE YEAR LANGUAGE COURSES) (B.Com., B.Com. (C.A.), B.Com. (Finance), B.B.A., B.Sc. Computer Science, B.Sc. Information Technology and B.C.A.)							
SEM	Title of the paper	S.CODE	H/W	C	I	E	T
PART I – TAMIL							
I	,f;fhyj; jkpo;	15UTAL11	6	3	25	75	100
II	rkaj; jkpo;	15UTAL21	6	3	25	75	100
TOTAL			12	6	50	150	200
PART I – ARABIC							
I	Applied Grammar and Translation – I	15UARL11	6	3	25	75	100
II	Applied Grammar and Translation – II	15UARL21	6	3	25	75	100
TOTAL			12	6	50	150	200
PART II – ENGLISH							
I	Prose, Poetry and Remedial Grammar - I	15UENL11	6	3	25	75	100
II	Prose, Poetry and Remedial Grammar - II	15UENL21	6	3	25	75	100
TOTAL			12	6	50	150	200

B.Sc. Computer Science - CBCS Syllabus								
TITLE OF THE PAPERS, CREDITS & MARKS								
SEM	SUB	Title of the paper	S.CODE	H/W	C	MARKS		
						I	E	T
I	C1	CProgramming	15UCSC11	4	4	25	75	100
	C2	Discrete Mathematics	15UCSC12	3	4	25	75	100
	CP-I	Computer Science Core Practical – I	-	3	-	Examination II Semester		
II	C3	C++ Programming	15UCSC21	4	4	25	75	100
	C4	Digital Principles & Applications	15UCSC22	3	4	25	75	100
	CP-I	Computer Science Core Practical – I	15UCSC2P	3	3	40	60	100
III	C5	Java Programming	15UCSC31	5	4	25	75	100
	C6	MicroProcessor	15UCSC32	5	4	25	75	100
	C7	Web Design	15UCSC33	5	4	25	75	100
	CP-II	Computer Science Core Practical – II	-	3	-	Examination IV Semester		
IV	C8	Data Structures in C	15UCSC41	5	4	25	75	100
	C9	Computer Graphics	15UCSC42	5	4	25	75	100
	C10	Operating Systems	15UCSC43	5	4	25	75	100
	CP-II	Computer Science Core Practical – II	15UCSC4P	3	3	40	60	100
V	C11	J2EE	15UCSC51	6	5	25	75	100
	C12	Software Engineering	15UCSC52	5	5	25	75	100
	C13	PHP	15UCSC53	5	5	25	75	100
	CP-III	Computer Science Core Practical – III	-	3	-	Examination VI Semester		
	CP-IV	Computer Science Core Practical – IV	-	3	-	Examination VI Semester		
	CE1	A) RDBMS with SQL Server	15UCSE5A	5	6	25	75	100
		B) RDBMS with ORACLE	15UCSE5B					
	CE-P	Computer Science Core Elective Practical – A	-	3	-	Examination VI Semester		
Computer Science Core Elective Practical – B		-						
VI	C14	Data Communications and Networking	15UCSC61	6	5	25	75	100
	C15	VB.Net	15UCSC62	5	5	25	75	100
	C16	Project	15UCSP61	5	5	-	100	100
	CP-III	Computer Science Core Practical – III	15UCSC6P1	3	3	40	60	100
	CP-IV	Computer Science Core Practical – IV	15UCSC6P2	3	3	40	60	100
	CE2	A) C # Programming	15UCSE6A	5	6	25	75	100
		B) PC Hardware and Trouble Shooting	15UCSE6B					
	CE-P	Computer Science Core Elective Practical	15UCSE6P	3	3	40	60	100
TOTAL				116	97	625	1675	2300

**DEPT. OF COMPUTER SCIENCE
CBCS SYLLABUS**

PART III - ALLIED I & II - COMPUTER APPLICATIONS								
SEM	P	TITLE OF THE PAPER	S.CODE	H/W	C	MARKS		
						I	E	T
I	AI-1	Office Automation	15UCAA11	3	4	25	75	100
	AI-P	Allied I - Practical	-	3	-	Examination II Semester		
II	AI-2	Web Graphic Design	15UCAA21	3	4	25	75	100
	AI-P	Allied I - Practical	15UCAA2P	3	2	40	60	100
III	AII-1	Unix and Shell Programming	15UCAA31	3	4	25	75	100
	AII-P	Allied II - Practical	-	3	-	Examination IV Semester		
IV	AII-2	Active Server Pages	15UCAA41	3	4	25	75	100
	AII-P	Allied II - Practical	15UCAA4P	3	2	40	60	100
TOTAL				24	20	180	420	600

PART IV - SKILL BASED ELECTIVE (FOR B.Sc. Computer Science)

SEM	P	TITLE OF THE PAPER	S.CODE	H/W	C	MARKS		
						I	E	T
III	1	Operations Research	15UCSS31	3	2	25	75	100
IV	2	Quantitative Aptitude	15UCSS41	3	2	25	75	100
TOTAL				6	4	50	150	200

**PART IV- NON-MAJOR ELECTIVE
(FOR OTHER MAJOR STUDENTS)**

III	1	Office Automation	15UCSN31	3	2	25	75	100
IV	2	Desktop Publishing	15UCSN41	3	2	25	75	100
TOTAL				6	4	50	150	200

**PART IV - EVS & VALUE EDUCATION
(FOR ALL MAJOR STUDENTS)**

I	1	Environmental Studies	15UEVS11	2	1	25	75	100
II	2	Islamic Value Education	15USVE2A	2	1	25	75	100
		Value Education	15USVE2B					
TOTAL				4	2	50	150	200

PART - V

SEM	Extension Activities (Choose any one)		S.CODE	H/W	C	I	E	T
I to IV	Enviro Club		15UEXEVC	-	1	-	100	100
	NCC		15UEXNCC					
	NSS		15UEXNSS					
	Physical Education		15UEXPHY					
	Red Ribbon Club		15UEXRRC					
	Sadakath Outreach Programme		15UEXSOP					
	Youth Red Cross		15UEXYRC					
	Youth Welfare		15UEXYWL					
TOTAL				-	1	-	100	100

PART – 1 TAMIL			
Kjy; gUtk;			
Part – 1	,f;fhyj; jkpo;		15 UTAL11
Hrs/Week : 6	Hrs/Sem : 90	Hrs/Unit : 18	Credits : 3

Nehf;fk; :

- ❖ jkpo;g; gilg;gpyf;fpaq;fshd GJf;ftpijfs;> rpWfijfs; Mfpatw;iw vOj itj;jy;.
- ❖ r%fk; gw;wpa rpe;jidfisg; gilg;gpyf;fpaq;fs; %yk; Vw;gLj;Jjy;.

myF - 1

jkpo;r; nra;As; - GJf;ftpijfs;

- | | | |
|---|---|-----------------------------|
| 1. my;yh`; | - | kfhftp ghujpahh; |
| 2. jkpOf;F mKnjd;W ngah; | - | ghNte;jh; ghujpjhrd; |
| 3. ghly; | - | gl;Lf;Nfhl;il fy;ahzRe;juk; |
| 4. Mapuk; jpUehkk; ghb | - | ftpf;Nfh mg;Jy; uFkhd; |
| 5. Njrg;gpjhTf;F xU njUg;
ghlfddpd; mQ;ryp | - | K. Nkj;jh |
| 6. le;J nghpJ MW rpwpJ | - | ituKj;J |
| 7. kio nfhLf;Fk; | - | ftpauR fz;zjhrd; |
| 8. vj;jpirapypUe;J vwpag;gl;lj | - | fy;ahz;[p |
| 9. rpNdfjddpd; jho;thd tPL | - | fyhg;gphpah |
| 10. J}f;fk; tpw;w fhRfs; | - | urpft;Qhdpahh; |
| 11. Njhoh; NkhrpfPudhh; | - | Qhdf;\$j;jd; |
| 12. taYk; tho;Tk; | - | eh.Kj;Jf;Fkhh; |
| 13. flTs; Nghw;wp | - | ftpkzp |
| 14. ez;gNd | - | fyPy; [Pg;uhd; |
- myF -2 (rpWfijf; fsQ;rpak;)
- | | | |
|---------------------------|---|----------------------|
| 1. fhQ;rid | - | GJikg;gpj;jd; |
| 2. \$wy; | - | tz;zjhrd; |
| 3. nrhh;f;f fd;dpif | - | fUzhkzhdsd; |
| 4. fhyj;jpd; Mtu;j;;j;dk; | - | Njhg;gpy; KfkJkPuhd; |
| 5. fdtpy; cjph;e;j g+ | - | ehWk;g+ehjd; |
| 6. uh[kPd; | - | fPuD}h; [h`ph;uh[h |

7. rq;fhj;jp - jPd;

myF- 3 ciueil

1. gbg;gJ RfNk – nt. ,iwad;G ,.M.g.
ePA+ nrQ;Rup Gf; `T]; (gp) ypl;> nrd;id.

myF- 4 ,yf;fpa tuyhW

1. jkpo;g; GJf;ftpijfs; Njhw;wKk; tsh;r;rpAk;
2. jkpo;r; rpWfijfs; Njhw;wKk; tsh;r;rpAk;
3. jlk; gjpj;j jkpo;r; rpWfijahrphpah;fs;
4. jw;fhyj; jkpo;g; GJf;ftpijfs;> rpWfijfspd; Nghf;F

myF- 5 ,yf;fzk;

1. vOj;J tif gw;wpa tpsf;fk;
KjnyOj;Jfs;> rhh;ngOj;Jfs;> RI;nIOj;Jfs;> tpdhntOj;Jfs;
2. nkhop Kjy; vOj;Jf;fs;> nkhop ,Wjp vOj;Jfs;
3. ty;ypdk; kpFkplq;fs;> kpfh ,lq;fs;

PART – 1 TAMIL			
,uz;lhk; gUtk;			
Part – 1	rkaj; jkpo;		15 UTAL21
Hrs/Week : 6	Hrs/Sem : 90	Hrs/Unit : 18	Credits : 3

Nehf;fk; :

- ❖ **gyrkaf; fUj;Jf;fis xg;gpl;Lr; rka ey;ypzf;fj;NjhL khzth;fs; tho ,g;gUtk; Jiz GhpfpwJ.**
- ❖ **jkpo;ehL muRg; gzpahsh; Njh;thizaj; Njh;Tf;F khzth;fis Maj;jg;gLj;Jjy;**

myF- 1

jkpo;r; nra;As; (Jiw ntspaPL)

irtk;

1. Njthuk;

jpUehTf;furh;

- **khrrpy; tPizAk;...**
- **ehkhu;f;Fk; Fbay;Nyhk;...**
- **mg;gd; eP mk;ik eP...**

jpUQhdrk;ge;jh;

- **NjhLila nrtpad;...**
- **NtAW Njhsp gq;fd;...**
- **kUe;jit ke;jpuk;...**

Re;ju%h;j;jp ehadhh;

- **gpj;jh gpiw#b...**

2. jpUthrfk;

khzpf;fthrfh;

- **ghy; epide;J}l;Lk;...**

3. jpUntk;ghit

- **MjpAk; me;jKk; ,y;yh...**

4. jpUke;jpuk;

jpU%yh;

- **xd;Nw FyKk; xUtNd NjtDk;...**

itztk;

5. ngha;ifaho;thu;

- **itak; jfspah...**

G+jj;jho;thu;

- **md;Ng jfspah...**

Ngaho;thu;

- **jpUf;fz;Nld;...**

6. jpUg;ghit
Mz;lhs; - khu;fopj; jpq;fs;...
7. tisahgjp - kf;fl; nry;tk;
ngsj;ik;
8. Gj;jgpuhd; - K.uh.ngUkhs;
fpwpj;itk;
9. ,NaR fhtpak; (rpy gFjpf;f;) - fz;zjhrd;
,l;yhk;
10. egpfs; ehaf khd;kpa kQ;rhp - rjhtjhdp nra;Fj;jk;gpg;ghtyh; (Fwpg;gpl;l ghly;fs;)
11. Fzq;Fb kJ;jhd; ghly;fs; - ghrf;fapw;W tiy
12. Qhdg; Gfo;r;rp - jf;fiy gPh;KfkJ mg;gh
13. myfpyh mUSk; - ,iwaUl; ftpkzp. fh.mg;Jy;fg+h;
ePip ,yf;fpaq;fs;
14. jpUf;Fws; (thd; rpwg;G)
15. ehybahh; - fy;tp fiuapy
16. ,d;dhehw;gJ - Md;wtpj;j...
myF- 2 Gjpdk;
“fy;kuk;” - jpyftjp
myF - 3 ciueil (jkpo;j; Jiw ntspaPL)
1. egpfs; ehafk; (Jy;) md;gpd; jhafk;
2. rjf;fj;Jy;yh` ; mg;gh mth;fspd; tho;Tk; gzpAk;
3. [ftp.fh.K.n~hpg;](#) - j.K.rh fhrhikjPd;
4. ftpf;Nfh mg;Jy;uFkhdpd; ftpijfs;
5. jkpo; ,yf;fpaq;fspy; kdpjNear; rpe;jidfs;
6. ,izaj;jpy; jkpo;
myF- 4 (Nghl;bj; Njh;Tj; jahhpg;G)
,yf;fpa tuyhW
1. irtk;> itztk;> fpwpj;Jtk;> ,Ryhk; tsh;j;j jkpo;
2. Gfo; ngw;w jkpo; E}y;fs;> E}yhrphpah;fs;
3. jkpo;ehL muRg; gzpahsh; Njh;thizak; elj;Jk; Nghl;bj; Njh;Tf;Fhpa nghJj;jkpo;
ghlj;jpl;lk; - Xh; mwpKfk;
myF- 5 ,yf;fzk;
Nth;r;nrhy; mwpjy;> mfuthpirg;gb khw;wpaikj;jy;> nra;tpid>
nra;ag;ghl;Ltpid> jd;tpid> gpwtpid> cld;ghL> vjph;kiw> nra;jp thf;fpak;>

fyit thf;fpak;> ngah;tpid> ,il> chpr;nrhw;fspd; ,yf;fzk; kw;Wk;
ngah;r;nrhy;> tpidr;nrhy; tifs;> yfu> sfu> zfu> ufu> wfu NtWghLfs;.

Part - I ARABIC			
Applicable for Group I Courses (One Year Language Courses) such as B.Com, B.Com. (C.A) B.Com, (Finance) , B.B.A, B.Sc. Computer Science, B.Sc., Information Technology and B.C.A.			
PAPER-I	APPLIED GRAMMAR AND TRANSLATION-I		15UARL11
Hrs/ Week: 6	Hrs/ Sem: 90	Hrs/ Unit: 18	Credits: 3

Unit I :-

Lessons 1 to 5 (Reader)

Unit II :-

Lessons 6 to 10

Unit III :-

Grammar Portions

- 1) Al Mufrad wal- muthanna wal jam'
- 2) Huroof ul Jarr
- 3) Asmaa – ul Ishaarah.
- 4) Adawaatul Istifhaam
- 5) Ad Damaair – ul – Munfasilah Val Muthasilah
- 6) Al-Idaafah
- 7) Al Muqtada wal khabar
- 8) As-sifatu wal mausoof
- 9) Al mudhakkar wal muannath
- 10) Asmaa-ul-mausool

Unit IV :-

Lessons 11 to 15

Unit V :-

Lessons 16 to 20

TEXT BOOKS

1) *Duroosul Lughatil Arabiya Part – I (Reader) - Lessons 1 to 20 only by Dr.V. Abdur Rahim. Available at Islamic foundation Trust, 78 Perambur High Road , Perambur, Chennai- 600 012.*

2) *An-Nahwul Waadih Ibtidayee – Part I (Grammar, selected topics only) by Ali Al-jaarim and Mustafa Ameen. Available at Hilal Book House , Tirurkad, Angadipuram, Kerala.*

Semester - II			
PAPER-II	APPLIED GRAMMAR AND TRANSLATION-II		15UARL 21
Hrs/ Week: 6	Hrs/ Sem: 90	Hrs/ Unit: 18	Credits: 3

Unit I :-

Lessons 1 to 3 (Reader)

Unit II :-

Lessons 4 to 7

Unit III :-

Grammar Portions

- 1) Inna wa Akhavaatuha.
- 2) Ismut Tafleel
- 3) AlMali wal Mularee
- 4) Al-Amr wan Nahi
- 5) Al Fa-il
- 6) Al Maf'ool
- 7) Al-Asmaul Mausool
- 8) Taqseemu Fihl ila As-saheeh wal Muhtal
- 9) Ismul Maf'ool
- 10) Ismul Faa'il.

Unit IV

Lessons 8 to 11

Unit V

Lessons 12 to 15

TEXT BOOKS

1. **Duroosul Lughatil Arabiya** Part – II (Reader) Lessons 1 to 15 only by Dr.V. Abdur Rahim. Available at: Islamic foundation Trust, 78 Perambur High Road , Perambur, Chennai- 600 012.
2. **An-Nahwul Waadih Ibtidayee** –Part I &II (Selected Grammar Portions only) by Ali Al-jaarim and Mustafa Ameen. Available at: Hilal Book House , Tirurkad, Angadipuram, Kerala.

PART – II ENGLISH
ONE – YEAR LANGUAGE COURSE
B.Com., B.Sc. Computer Science, Information Technology, B.B.A.,
B.Com, (C.A), B.C.A., and B.Com (Finance)

I SEMESTER			
EN1	PROSE, POETRY AND REMEDIAL GRAMMAR - I		15UENL11
Hrs/ Week: 6	Hrs/ Sem: 90	Hrs/ Unit: 18	Credits: 3

Objectives:

1. To answer comprehensive questions on passages of moderate level of difficulty.
2. To analyse the prescribed prose pieces and to attempt a critical appreciation of the poems.
3. To write grammatically.

UNIT I – PROSE

1. Letter to a Teacher - Nora Rossi and Tom Cole (Trans.)
2. Spoken English and Broken English - George Bernard Shaw
3. Voluntary Poverty - M.K. Gandhi

UNIT II – PROSE

4. A Snake in the Grass - R.K. Narayan
5. The Civilization of Today - C.E.M. Joad
6. Kamala Nehru - Jawaharlal Nehru

UNIT III – POETRY

1. On His Blindness - John Milton
2. Upon Westminster Bridge - William Wordsworth
3. When I have Fears - John Keats

UNIT IV – FUNCTIONAL GRAMMAR

1. Articles and Nouns (Units 68-80 of *Intermediate English Grammar*)
2. Pronouns and Determiners (Units 81-90 of *Intermediate English Grammar*)

UNIT V – FUNCTIONAL GRAMMAR

3. Reported Speech (Units 46-47 of *Intermediate English Grammar*)
4. Questions and auxiliary verbs (Units 48-51 of *Intermediate English Grammar*)
5. 'ing' and the infinitive (Units 52-67 of *Intermediate English Grammar*)

TEXTBOOKS:

1. T. Srirama, Colin Swatridge. ed. *College Prose and Poetry*. TRINITY, New Delhi: Trichy, 1989 (rpt. 2014).
2. Raymond Murphy. ed. *Intermediate English Grammar*. New Delhi : Cambridge University Press, 1994 (rpt. 2006).

II SEMESTER			
EN2	PROSE, POETRY AND REMEDIAL GRAMMAR - II		15UENL21
Hrs/ Week: 6	Hrs/ Sem: 90	Hrs/ Unit: 18	Credits: 3

Objectives:

1. To answer comprehensive questions on passages of moderate level of difficulty.
2. To analyse the prescribed prose pieces and to attempt a critical appreciation of the poems.
3. To write grammatically.

UNIT I – PROSE

- | | |
|--------------------------|-----------------------|
| 1. With the Photographer | - Stephen Leacock |
| 2. Professions for Women | - Virginia Woolf |
| 3. On Letter Writing | - Alpha of the Plough |

UNIT II – PROSE

- | | |
|-------------------------------|-------------------------|
| 4. The Night the Ghost Got In | - James Thurber |
| 5. The Donkey | - Sir. J.Arthur Thomson |
| 6. A Cup of Tea | - Katherine Mansfield |

UNIT III – POETRY

- | | |
|---------------------------|------------------------|
| 1. The Flower | - Alfred Lord Tennyson |
| 2. Homage to a Government | - Philip Larkin |
| 3. Obituary | - A.K. Ramanujan |

UNIT IV – FUNCTIONAL GRAMMAR

1. Present and Past (Units 1-6 of *Intermediate English Grammar*)
2. Present Perfect and Past (Units 7-18 of *Intermediate English Grammar*)
3. Future (Units 19-22 of *Intermediate English Grammar*)

UNIT V – FUNCTIONAL GRAMMAR

4. Future (Units 23-25 of *Intermediate English Grammar*)
5. Modals (Units 26-36 of *Intermediate English Grammar*)
6. Conditionals and 'Wish' (Units 37-40 of *Intermediate English Grammar*)
7. Passive (Units 41-45 of *Intermediate English Grammar*)

TEXTBOOKS:

1. T. Srirama, Colin Swatridge. ed. *College Prose and Poetry*. TRINITY, New Delhi: Trichy, 1989 (rpt. 2014).
2. Raymond Murphy. ed. *Intermediate English Grammar*. New Delhi: Cambridge University Press, 1994 (rpt. 2006).

B.Sc. (Computer Science) - CBCS SYLLABUS			
PART III – CORE, CORE ELECTIVE & PROJECT			
I SEMESTER			
C1	C PROGRAMMING		15UCSC11
Hrs/Week: 4	Hrs/Sem: 4x15=60	Hrs./ Unit: 12	Credit: 4

Objectives:

- To understand the usages of tools and features in the language
- To build ability to develop programs using the tools and features of the language
- To mould the skills to develop software

UNIT I

Character Set – C tokens – Keywords and Identifiers – Constants, Variables, data types-Declaration of variables – declaration of storage classes – Assigning values to the variables – defining symbolic constants – Declaring a variable as constant – Arithmetic operators – Relational operators – Logical operators – Assignment operators – Increment and decrement operators – Conditional operators – bitwise operators – Special operators – Arithmetic expressions – evaluation of expressions – precedence of Arithmetic operators-Type conversions in expressions – Mathematical functions.

UNIT II

Decision Making – If Statement – The If-else statement – Nesting of If statement – The else-if ladder – the switch statement – the ?: operator – the goto statement-Decision making and looping – the while statement – the do statement – the for statement – jumps in loops.

UNIT III

Arrays – one dimensional, two dimensional and multi dimensional arrays – Dynamic arrays – Character arrays and strings – Declaring and initializing string variables – Reading string from terminals – string handling functions – User defined functions – Category of functions – Nesting of functions – Recursive functions

UNIT IV

Structure and Unions – Accessing structure members – Arrays of structures – Arrays within structures – Unions – bit fields – pointers – pointer expressions – pointers and arrays – pointers and character strings – Array of pointers – pointers and structures. – preprocessor directives.

UNIT V

File management – Defining and opening a file – closing a file – Input/output operations in files – Random access files – command line arguments.

File management – Defining and opening a file – closing a file – Input/output operations in files – Random access files – command line arguments.

TEXT BOOK:

Computing Fundamentals and C Programming – E Balagurusamy – Tata McGraw – Hill Publishing Company

I SEMESTER			
C2	DISCRETE MATHEMATICS		15UCSC12
Hrs/Week: 3	Hrs/Sem: 3x15=45	Hrs./ Unit: 9	Credit: 4

UNIT I Set theory:

Sets and elements, Universal Set and Empty Set, Subsets, Venn Diagrams, Set Operations, Algebra of Sets and Duality, Finite, Infinite Sets and Counting Principle, The Inclusion-Exclusion Principle, Classes of Sets, Power Sets, Partitions.

UNIT II Relations:

Product Sets, Relations, Picture Representations of Relations, Composition of Relations, Types of Relations, Closure Properties, Equivalence Relations, Partial Ordering Relations.

UNIT III Logic and Propositional Calculus:

Propositions and Compound Propositions, Basic Logical Operations, Propositions and Truth Tables, Tautologies and Contradictions, Logical Equivalence, Algebra of propositions, Conditional and Biconditional statements, Arguments, Logical Implication

UNIT IV Vectors and Matrices:

Vectors, Matrices, Matrix Addition and Scalar Multiplication, Matrix Multiplication, Transpose, Square Matrices, Invertible(Nonsingular) Matrices, Inverses, Determinants, Elementary Row Operations, Gaussian Elimination, Boolean(Zero-One) Matrices.

UNIT V Graph Theory:

Graphs and Multigraphs, Subgraphs, Paths, Connectivity, Euler graph, Hamiltonian graph, Labeled and Weighted graphs, Complete, Regular and Bi partite graphs, Tree graphs, Planar graphs.

TEXT BOOK:

Discrete Mathematics – Seymour Lipschutz and Marc Lars Lipson - Schaum’s Series – Third Edition – Tata McGraw Hill Publications.

REFERENCE BOOKS:

1. Modern Algebra - Arumugam and Isaac, SciTech Publication.
2. Graph Theory - Arumugam and Isaac, SciTech Publication.

II SEMESTER			
C3	C++ PROGRAMMING		15UCSC21
Hrs/Week: 4	Hrs/Sem: 4x15=60	Hrs./ Unit: 12	Credit: 4

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 - Type Conversions.

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 Working with Files

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:

Object -Oriented Programming with C++ By E.Balagurusamy, The McGraw-Hill, 4th Edition. Chapters: 5 (except 5.17, 5.18, 5.19), 6, 7, 8, 15.

REFERENCE BOOKS:

Object - Oriented programming in Turbo C++ By Robert Lafore

II SEMESTER			
C4	DIGITAL PRINCIPLES & APPLICATIONS	15UCSC22	
Hrs/Week: 3	Hrs/Sem: 3x15=45	Hrs./ Unit: 9	Credit: 4

Objectives:

To learn fundamentals of number system, logic design and the basic building blocks used in digital computer.

UNIT I

Number systems: Binary Addition and Subtraction – Binary Multiplication and Division Converting Decimal numbers to Binary-Negative numbers – Use of Complements to represent Negative numbers – Binary number complements – Binary-Coded-Decimal(BCD) Number – Octal and Hexadecimal number systems. .

UNIT II

Boolean algebra and Gate networks: Fundamental concepts of Boolean algebra – Logical multiplication – AND gates and OR gates – complementation and inverters – logic expressions evaluation – Basic laws of Boolean Algebra – De Morgan’s theorem – Duality of boolean algebra - Sum of Products(SOPs) and Product of Sums(POSs) – Map Simplification using Karnaugh Maps – Don’t care conditions – Design using NAND gates - Design using NOR gates – NAND-TO-AND and NOR-TO-OR gates.

UNIT III

Logic Circuits – Combinational Circuits - Half Adder – Full Adder. Flip-Flop – SR flip-flops – D flip-flop - JK flip flop – T flip_ flop – Edge_Triggered flip-flops.

UNIT IV

Registers – Registers with parallel load. Shift Registers – Bidirectional Shift Registers with parallel load

UNIT V

Counters: Binary counter – Ripple counter - BCD counters – Synchronous and Asynchronous counters – Shift Counter – Ring Counter – Up down counter

TEXT BOOKS:

1. Digital computer Fundamentals – Thomas C. Bartee, Sixth Edition, McGraw – Hill Publications
2. Computer System Architecture – M.Morris Mano, third Edition, PHI Publication

REFERENCE BOOKS:

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

I & II SEMESTERS		
CP I	CORE PRACTICAL – I *	15UCSC2P
Hrs/Week: 3	Hrs/Sem: 3 x 15 = 45	Credit: 3

*** Examination at the end of II Semester**

C PROGRAMMING PRACTICAL

1. Program using Library Functions
2. Program using for-loop
3. Program using while loop
4. Program using do-loop
5. Program using nested if-else
6. Program using 'switch'
7. Program using user-defined Functions
8. Program using Recursive Function
9. Program implementing One-dimensional Array
10. Program implementing Two-dimensional Array
11. Program to process Strings
12. Program using pointer
13. Program implementing structure
14. Program to process files
15. Program with command-line arguments

C + + PROGRAMMING PRACTICAL

1. Program using arrays within a class.
2. Program using static class members.
3. Program using arrays of objects.
4. Program using objects as function arguments and function returning object
5. Program implementing overloaded constructors.
6. Program implementing Two-dimensional arrays.
7. Program implementing Destructor.
8. Program to overload operators.
9. Program to overloading binary operators using friend function.
10. Program implementing multiple, multilevel inheritances.
11. Program implementing constructors in derived class.
12. Program to create a file.
13. Program to work with multiple files.
14. Program using sequential I/O operations
15. Program to update a file by Random access.

III SEMESTER			
C 5	JAVA PROGRAMMING		15UCSC31
Hrs/Week: 5	Hrs/Sem: 5x15=75	Hrs./ Unit: 15	Credit: 4

UNIT I Overview of Java Language:

Introduction – Simple Java Program – More Of Java – An Application With Two Classes – Java Program Structure – Java Tokens – Java Statements Installing And Configuring Java – Implementing A Java Program – Java Virtual Machine – Command Line Arguments – Programming Style. Constants, variables and data types: Constants - Variables - Data Types – Declaration of Variables – Giving Values To Variables - Scope Of Variables – Symbolic Constants Type Casting Getting Values Of Variables – Standard Default Values. Operators and Expressions: Operators - Expressions – Evaluation Of Expressions – Precedence Of Operators – Associativity – Type Conversions In Expressions – Mathematical Functions.

UNIT II Decision making and branching:

Decision Making With If Statement – Simple If Statement – If...Else Statement – Nesting Of If... Else Statements – Else...If Ladder – Switch Statement – The ?: Operator. Decision making and looping: While Statement – Do Statement – For Statement – Jumps In Loops – Labeled Loops. Classes, Objects and methods: Defining A Class – Fields Declaration – Methods Declaration – Creating Objects – Accessing Class Members – Constructors – Methods Of Overloading – Static Members – Nesting Of Methods.

UNIT III INHERITANCE:

Extending a Class – Overriding Methods – Final – Variables, Methods And Classes – Finalizer Methods – Abstract Methods And Classes – Methods With Varargs – Visibility Control. ARRAYS, STRINGS AND VECTORS: One-Dimensional Arrays – Creating An Array – Two-Dimensional Arrays – Strings – Vectors – Wrapper Classes – Enumerated Types. INTERFACES AND PACKAGES: Defining Interfaces – Extending Interfaces – Implementing Interfaces – Accessing Interface Variables. Java API Packages – Using System Packages – Naming Conventions – Creating Packages - Accessing A Package – Using A Package – Adding Classes To A Package – Hiding Classes – Static Import.

UNIT IV Multithreaded programming:

Creating Threads – Extending Thread Class – Stopping And Blocking A Thread – Life Cycle Of A Thread – Using Thread Methods – Thread Exceptions – Thread Priority – Synchronization – Implementing Runnable Interface – Inter-Thread Communication. Managing Errors and Exceptions: Types Of Errors – Exceptions – Syntax Of Exception Handling Code – Multiple Catch Statements – Finally Statement – Throwing Our Own Exceptions – Using Exceptions For Debugging. Applet Programming: How Applets Differ From Applications? – Preparing Applets – Building Applet Code – Applet Life Cycle – Creating An Executable Applet – Designing A Web Page – Applet Tag – Adding Applet To HTML File – Running Applet - More About Applet Tag - Passing Parameters To Applets – Aligning The Display – Displaying Numerical Values - Getting Input From User – Event Handling.

UNIT V Graphics Programming:

The Graphics Class – Drawing Lines, Rectangles, Circles, Ellipses, Arcs, Polygons – Line Graphs – Using Control Loops in Applets – Drawing Bar Charts – Introducing to AWT Package And Swings. MANAGING INPUT/OUTPUT FILES IN JAVA: Concept Of Streams – Stream Classes – Other Useful I/O Classes – Creation Of Files – Reading / Writing Characters – Reading / Writing Bytes – Handling Primitive Data Types – Concatenating And Buffering Files – Random Access Files – Interactive Input And Output.

TEXT BOOK:

Programming with Java A Primer – E.Balagurusamy, McGraw Hill- Fourth Edition

REFERENCE BOOKS:

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

III SEMESTER			
C6	MICROPROCESSOR		15UCSC32
Hrs/Week: 5	Hrs/Sem: 5x15=75	Hrs./ Unit: 15	Credit: 4

UNIT I

Microprocessor, Microcomputers and Assembly Language: Microprocessors- Microprocessor Instruction set and Computer Languages.

Introduction to 8085 and Assembly Language Programming: 8085 Programming Model- Instruction Classification-Instruction, data format and storage - Overview of the 8085 instruction set.

UNIT II

8085 Microprocessor Architecture: Microprocessor Architecture and its operations - The 8085 Microprocessing unit[MPU] – Example of an 8085 based Microcomputers- Memory Interfacing – memory mapped I/O.

Introduction to 8085 Instructions: Data transfer operations- Arithmetic operations- Logic operations- Branch operations.

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.

Counters and Time Delays: Counters and Time Delays-Hexadecimal counter-Modulo Ten Counter-Generating Pulse waveforms.

UNIT IV

Stack and Subroutines: Stack –Subroutine-Restart, Conditional call and Return instructions-Advanced Subroutine Concepts-Microprocessor Controlled Traffic signal system.

Interrupts: 8085 Interrupts-Vectored Interrupts- Restart as Software Instructions

UNIT V

16-bit Microprocessors – Intel 8086/8088 - Intel 80186/80286 – High-end-Performance Processors - Intel 80386/80486 – Intel Pentium – RISC.

TEXT BOOK:

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

Unit I: 1.1,1.2,2.1,2.2,2.3,2.5

Unit II: 3.1,4.1,4.2,4.2.3,2.5,5.4, 6.1 to 6.4

Unit III: 7, 8.1 to 8.4

Unit IV: 9, 12.1,12.2,12.3

Unit V: 18.1 to 18.4

REFERENCE BOOK:

Advanced Microprocessors and Interfacing by Badri Ram, McGraw Publication.

III SEMESTER			
C7	WEB DESIGN		15UCSC33
Hrs/Week: 5	Hrs/Sem: 5x15=75	Hrs./ Unit: 15	Credit: 4

UNIT I Introduction to Internet and HTML:

Introduction to the Internet- History of Internet - World Wide Web - Usenet-Telnet-Bulletin Board Service - Internet Technologies - Modem - Internet Addressing - Physical Connections- Telephone lines - Internet Browsers - IE-Netscape Navigator- History of HTML - HTML documents - Anchor tag, Hyperlinks-HEAD and BODY sections - Title, Prologue, Links - Colorful Webpage-Comment Line - Designing the Body section - Aligning the headings - HR tag - Paragraphs - Images and Pictures - Embedding PNG format images.

UNIT II Lists and DHTML:

Ordered and Unordered lists - Nested Lists - Headings in a list - Table Handling - Table creation in HTML - width of the table and Cells - Cell spanning - Coloring cells - Column specification-DHTML and styles sheets-Defining styles-Elements of styles-Linking a style sheet to a HTML document-In-line Styles-External styles sheets-Internal Style sheets-Multiple Styles.

UNIT-III Frames, Forms and Email:

Frames - Frameset definitions - Frame definitions - Nested framesets - Forms - Action attributes-Method attribute - Enctype attribute - Check Boxes-Radio Buttons - Text Fields - Text Areas - Password-Submit and Reset Buttons - Drop down list - Sample forms.Working with E-Mail - Anatomy of an E-mail message - Viewing your Inbox - Sending a new mail message - Replying to and forwarding E-mail messages - E-mail netiquette - Fourteen mail management tips and Tricks - Internet abuse.

UNIT-IV Java Scripts:

Introduction to Java Scripts-Java Scripts Variables-Java Scripts Operators-Conditional Statements-Java Scripts Popup boxes-Java Scripts Functions-Java Scripts Events -Java Scripts Try catch statements-the onerror Events-Java Scripts Special Characters-Java Scripts Objects-Java Scripts HTML DOM Objects.

Unit-V Multimedia:

Introduction: E-business Model: Storefront models-Shopping-Cart Technology-Auction Model-Portal Model-Name-your-price model-building an E-Business-E-Marketing-Online Payments-Credit-card payment-Digital Cash and E-Wallets-Micro payments-Smart cards-Security: public-key cryptography-cryptanalysis-key agreement protocols-key management-SSL-WTLS-VPNs-Security attacks-Network Security.

TEXT BOOKS:

1. World Wide Web with HTML, Dr.C.Xavier., Tata McGraw - Hill Publishing Company.
2. Internet 101 A beginner's guide to the Internet and the World Wide Web, Wendy G.Lehnert, Pearson Education Asia Publication.
3. Web Technology, M.Kaliappan, Bharad Vijay Publication.

IV SEMESTER			
C8	DATA STRUCTURES IN C		15UCSC41
Hrs/Week: 5	Hrs/Sem: 5x15=75	Hrs./ Unit: 15	Credit: 4

Objectives

- To understand concepts of data structures
- To create ability to defining and implementing data structures in C
- To embark skill to write codes for data structure operations

UNIT I Arrays and Structures:

Arrays – Dynamically Allocated Arrays- Structures and Unions – Polynomials – Sparse Matrices: The abstract data types, sparse matrix representation, transpose a sparse matrix – Representation of Multidimensional Arrays – Strings.

UNIT II Stacks And Queues:

Stacks – Abstract data type stack – add, delete elements from stack – Queues – Abstract data type queue – add, delete elements from queue – Circular Queues – Evaluation of expressions – Evaluating postfix expressions – infix to postfix – Multiple stacks and Queues.

UNIT III Linked Lists:

Singly linked lists and Chains – Representing chains in C – create a two – node list – insert an element in a list – delete an element from a list – display the elements in a list – add and delete an element using linked stack and queue – polynomial representation using linked list – adding polynomials – doubly linked list – add and delete an element using doubly linked list.

UNIT IV Trees:

Terminology – Representation of trees – binary trees: abstract data type – properties of binary trees – Binary tree representations – binary tree traversals – in order, preorder and post order traversal – additional binary tree operations: copying and testing equality.

UNIT V Graphs:

Abstract data type – Definitions – Graph Representations – Adjacency Matrix, Adjacency Lists, Adjacency Multilists – Elementary Graph operations – Depth First Search, Breadth First Search, Connected Components, Spanning trees – Minimum cost spanning trees – Kruskal’s Algorithm, Prim’s Algorithm – Shortest path and transitive closure – single source all destinations, All pairs shortest paths, transitive closure.

TEXT BOOK:

Horowitz, Sahni and Anderson-Freed - Fundamentals of Data Structures in C, Second edition, University Press (India) private limited.

REFERENCE BOOKS:

Ellis Horowitz and Sartaj Sahni, Fundamentals of Data Structures, Galgotia Publications.

IV SEMESTER			
C9	COMPUTER GRAPHICS		15UCSC42
Hrs/Week: 5	Hrs/Sem: 5x15=75	Hrs./ Unit: 15	Credit: 4

Objectives:

- Through this course students are introduced to fundamental principles and algorithms underlying computer graphics, including line drawing algorithms, circle/ellipse drawing algorithms, 2D geometrical transformation, 3D geometric transformations, viewing in 3D (orthographic projection and perspective projection), and visible surface detection algorithms.

UNIT I

Introduction to computer Graphics - Video display devices- Raster scan Systems - Random Scan Systems - Interactive input devices - Hard copy devices - Graphics software

UNIT II

Output primitives - line drawing algorithms - initializing lines - line function - circle Generating algorithms- Ellipse- Generating algorithms.

UNIT III

Two-dimensional Geometric Transformation: Basic transformation-Matrix Representations and Homogeneous coordinates-Composite Transformations-other Transformations.

UNIT IV

Two - dimensional viewing - window- to view port co-ordinate transformation-Two dimensional Viewing functions-Clipping operations-point clipping-line clipping-polygen and curve clipping.

UNIT V

Three - dimensional concepts - Three dimensional display methods - parallel Projection - Perspective Projection - Depth Cueing - Visible line and surface identification - Three dimensional transformation.

TEXT BOOK:

D.Hearn and M.P.Baker - Computer Graphics (C version) - Pearson Education.

REFERENCE BOOK:

W.M. Newman and RF.Sproull - Principles of Interactive Computer Graphics - McGraw Hill International Edition - 1979.

IV SEMESTER			
C10	OPERATING SYSTEMS		15UCSC43
Hrs/Week: 5	Hrs/Sem: 5x15=75	Hrs./ Unit: 15	Credit: 4

Objectives

- To enable the students to learn the basic of operating system, threads, deadlock, partitioning, scheduling, file management
- To understand operating system, threads, concurrency, semaphores, deadlock, memory partitioning, paging, segmentation, virtual memory.
- To enable the students to learn the Scheduling, file management, UNIX process management.

UNIT I

Introduction - OS goals and functions – History of operating system- Different kinds of Operating system- Computer hardware review – Operation system concept- System calls- Operating system structure

UNIT II

Processes and threads: Processes – threads – thread model and usage – inter process communication -Deadlocks: Resources-introduction to deadlocks – deadlock detection and recovery – deadlocks avoidance – deadlock prevention.

UNIT III

CPU Scheduling: Basic Concept-Scheduling Method-Scheduling Criteria-Types of Scheduling-Scheduling Algorithms.

UNIT IV

Memory management: Basis memory management – virtual memory – page replacement algorithms - Input/Output: principles of I/O hardware - principles of I/O software.

UNIT V

Files systems: Files – directories - files systems implementation - Multiple processor system: multiprocessors – multi computers - distributed systems.

TEXT BOOK

1. Modern Operating Systems”, Second Edition, Andrew S. Tanenbaum, PHI private Limited, New Delhi, 2008.
2. Operating Systems”, Fifth Revised Edition, I.A.Dhotre, Technical Publications

Unit III –Chapter III (3.1 to 3.5)

III & IV SEMESTERS			
CP II	COMPUTER SCIENCE CORE PRACTICAL – II *	15UCSC4P	
Hrs/Week: 3	Hrs/Sem: 3x15=45	Hrs./ Unit: 9	Credit: 3

* Examination at the end of IV semester

JAVA PROGRAMMING PRACTICAL

1. Program using if...else statement
2. Program using nested if...else statement
3. Program using else...if ladder
4. Program using switch statement
5. Program using while loop
6. Program using do...while loop
7. Program using for loop
8. Program using nested loops
9. Program using classes and objects
10. Program using Multiple Constructors
11. Program using simple and multilevel inheritances
12. Program using methods overriding
13. Program using abstract class and methods
14. Program using one-dimensional arrays
15. Program using Two-dimensional arrays
16. Program using String arrays
17. Program using Vector class
18. Program using Wrapper classes
19. Program implementing interfaces
20. Program using package
21. Program to create threads using Thread class
22. Program using Thread methods
23. Program using priority in threads
24. Program using nested try...catch
25. Program throwing your own exception
26. Program using interactive input to an Applet
27. Program using event handling
28. Program to draw various shapes
29. Program to draw charts
30. Program copying characters from one file to another.

V SEMESTER			
C11	J2EE	15UCSC51	
Hrs/Week: 6	Hrs/Sem: 6x15=90	Hrs./ Unit: 18	Credit: 5

UNIT I Introduction

The Java2 Enterprise Architecture - J2EE Multitier Architecture - J2EE Implementation Architecture - Client Tier Implementation - Web Tier Implementation - EJB Tier Implementation - J2EE Application - Structured Query Language.

UNIT II Java Database Connectivity (JDBC)

Introduction - JDBC Driver Types - Loading JDBC Driver - Connect to the DBMS - Database Connection - Statement Object - Prepared Statement - Callable Statement - Result Set - Retrieving Results - Reading the Result Set - Scrollable Result Set - Updatable Result Set.

UNIT III Java Server Pages (JSP)

JSP Basics - Advantages of JSP - The Architecture of Java Server Pages (JSP) - JSP Tags - Variables and Objects - Methods - Control Statements - Loops - JSP Objects: Request Object - Out Object - Session Object - Cookies.

UNIT IV Java Servlets

Introduction - Java Servlet - Advantages of Servlets - Servlet Life Cycle - A Simple Java Servlet Generating Plain Text - A Servlet that Generates HTML - Handling Forms with Servlets.

UNIT V Remote Method Invocation (RMI)

Introduction to RMI - RMI Interface - Passing Objects - The RMI Process - Server Side - Client Side - Creating RMI Application - Steps involved in running the RMI Application.

TEXT BOOK:

J2EE - Complete Reference, Jim Keogh", Tata McGraw Hill Publication

REFERENCE BOOK:

Advanced Java Programming with Database Application - N. Krishnan, CIT, MSU

V SEMESTER			
C12	SOFTWARE ENGINEERING		15UCSC52
Hrs/Week: 5	Hrs/Sem: 5x15=75	Hrs./ Unit: 15	Credit: 5

UNIT I

Introduction - What is Software - What is Software Engineering – Software Process –software Process model – software engineering methods. Emergent system properties - systems engineering – system requirements – system design – system modelling – sub-system development – system integration –system evolution – system decommissioning – system procurement. Software processes: Software Process models: the waterfall model – Evolutionary development – Spiral development – CASE

UNIT II

Project Management - Management activities – Project Planning – Milestones and Deliverables - Project Scheduling – Bar charts and activity networks. Software requirement: Functional and non-functional requirements – Domain requirements - User requirements – System requirements – Structured language specification - Software Requirements Document(SRS) .

UNIT III

System Models – Context models – Behavioural models – Data-flow models – State machine models – Data models – Object models. Architectural Design - System Organisation - Repository model – Client-server model – Layered model – Modular decomposition Object oriented decomposition – Function oriented pipelining - Control Styles – Centralised control – Event driven system – Reference Architecture.

UNIT IV

Object oriented design: Object and object classes – An object oriented design process – design evolution. Real time software - System design – Real-time operating systems – Monitoring and control systems – Data Acquisition systems. User Interface design: User

Interface design issues – User Interface design process - User Interface prototyping - interface evaluation .

UNIT V

Verification and Validation – Software inspections. Clean – room software development. Software testing: System testing – Integration testing – Release testing - Performance testing –Component testing – Interface Testing. Software cost estimation: Algorithmic cost modeling – The COCOMO model. Quality management: Process and product quality – Software measurement and metric.

TEXT BOOK:

Software Engineering, IAN SOMMERVILLE, 8th Edition, Pearson Education Asia.

UNIT I - Chapters 1.1,2.1,2.2,4.1,4.2,4.3,4.5

UNIT II - Chapters 5,6.1,6.2,6.3,6.5

UNIT III – Chapters 8.1,8.2,8.3,8.4,11

UNIT IV – Chapters 14,15,16.1,16.2,16.4,16.5

UNIT V - 22, 23.1, 23.2, 26.1, 26.2, 26.3, 27.1,27.3,27.4,27.5

REFERENCE BOOKS:

Software Engineering Theory and Practices, SHARI LAWRENCE PFLEEGER, 6thEdition, Pearson Education Asia.

V SEMESTER			
C13	PHP	15UCSC53	
Hrs/Week: 5	Hrs/Sem: 5x15=75	Hrs./ Unit: 15	Credit: 5

Unit I

Introduction to PHP: 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.

Learning PHP Language: Basic Building Blocks: Variable, Data Type,Operators & Expression, Constant.Control Structures: if, if else,if elseif..else, for,foreach, do-while, while,break, continue, switch.

UNIT II

ARRAY: Anatomy of an Array: indexed and Associative Array, Creating Arrays, Accessing Array Elements, Looping through Array, Multidimensional Array, and Manipulating Array using array functions. Functions: What and why function, User-Defined Function, FunctionArguments, Returning values, Calling Function, Variable Function, andRecursive Function.String & Date-Time: Creating & Accessing String, String Manipulationusing string functions, Date-Time: Understanding Timestamp, Gettingcurrent date & time, Extracting date time values, format character for date,Formatting Date String.

UNIT III

Classes and Objects: Introduction to OOPS Concepts, VisibilityControls, Creating Class and Object, Create and using properties &methods, Overloading, Constructor, Destructor, Object Inheritance.

UNIT IV

Web-FormHandling FORM with PHP: Capturing form Data with PHP, Dealing with Multi-value Fields, Validating Form Input, Generating Web Forms, Storing Variable in Forms, Working with Multipage Forms, Creating File,Upload Forms, Redirecting form submission.

Preserving State in PHP: Understanding cookies, Session & Query String, Saving State with Query String, Working with cookies, PHP Session to store data.

UNIT V

Database Connectivity & SQL: Database,records,Primary and foreign Key-SQL statements-Creating Database-Adding Tables-Adding Records-Executing Queries-modifying and removing Records-Retriving Data-Returning data as array and Object.

TEXT BOOK:

PHP A beginner's Guide-Vikram Vaswani-Tata Mc Graw Hill

V SEMESTER			
CE1 A	RDBMS with SQL SERVER		15UCSE5A
Hrs/Week: 5	Hrs/Sem: 5x15=75	Hrs./ Unit: 15	Credit: 6

UNIT I

The Evolution of Database systems – Architecture of a DBMS – the Future of Database Systems.

UNIT II

Database Models – The Relational Data Model – Basics of the Relational model – E-R- Diagrams to Relational designs Functional Dependencies – Definition of Functional Dependency – Keys of Relations – Relations – Super Keys – Discovering keys for Relations – Rules about Functional Dependencies. 9

UNIT III

Design of Relational Database – anomalies – Decomposing Relations – Boyce-Codd Normal Form – Decomposition into BCNF – projecting Functional Dependencies – Third Normal Form – Multi valued Dependencies – Definition of Multi valued Dependencies – Fourth Normal Form – Decomposition into Fourth Normal Form – Relationship Among Normal Forms.

UNIT IV

Operations in the Relational Model – Set Operations of Relations – Projection – Selection – Cartesian Product – Natural joins – Intersection – Union – Differences – Product – Joins. Constraints on Relational – Referential Integrity Constraints – Other Extension to the Relations Model

UNIT V

Database Language SQL – Simple Queries in SQL – Queries involving more than one Relation – Sub Queries – Duplicates – aggregation – Database modification – Defining a Relation Scheme in SQL – View Definition – Constraints in SQL – Keys in SQL – Referential Integrity and Foreign Keys. Systems Aspects of SQL – SQL in Programming Environment – Security and User Authorization in SQL2.

TEXT BOOK:

A First course in Database Systems – Jeffrey D. Ullman and Jennifer Widom Addison Wesley Longman Pte. Ltd., Delhi – 2001.

REFERENCE BOOKS:

1. Fundamentals of Database Systems – Thrid Edition – Ramez Elmasri – Shamkant B. Navathe – Addison Wesley Longman Pte. Ltc – Delhi 2001.
2. Database Management Systems – Alexis leon and Mathews Leon – Vikas Publishing House Pvt. Ltd – New Delhi – 2002.

V SEMESTER			
CE 1B	RDBMS with ORACLE		15UCSE5B
Hrs/Week: 5	Hrs/Sem: 5x15=75	Hrs./ Unit: 15	Credit: 6

UNIT I

Introduction: Database-System Applications – Purpose of Database Systems – View of Data - Database Languages - Relational Databases – Data base design - Relational Model: Structure of Relational Databases – Fundamental Relational - Algebra Operations: The Select, Project, Union, Set-Difference, Cartesian-Product, Rename Operations – Formal Definition of the Relational Algebra.

UNIT II

Additional Relational-Algebra Operations - Extended Relational-Algebra Operations – Null Values - Modification of the Database - SQL: Background – Data Definition: Basic Domain Types – Basic Schema Definition in SQL - Basic Structure of SQL Queries - Set Operations: Union, Intersect, Except operation.

UNIT III

Aggregate Functions – Null Values – Nested Sub queries – Complex Queries – Views – Modification of the Database: Deletion, Insertion, Updates, Update of a view, Transactions - Advanced SQL: SQL Data Types and Schemas – Integrity Constraints: Not null, Unique, Check, Referential Integrity, Assertions – Authorization.

UNIT IV

SQL * PLUS: Menus – Commands – Editing the command line – The Describe, Column, Save, Get, Start, Edit commands. BASIC SQL: Oracle and SQL – SQL Language Basics – Select command – Oracle 8 Data types – Expressions and Operators – Functions, Insert, Update, Delete command, Transactions.

UNIT V

Creating and Maintaining Tables: Deleting a Table – Index Organized – Modifying Tables: The Alter Table command, Deleting a Table, Index-organized Tables - Indexes: Create, Change, Recreate, Eliminate an Index – Sequence: Create, Delete – Change Sequences – Views: Create, Select, Delete, Views – PL/SQL blocks control structure, programs, stored procedures and functions: Create, Execute, Delete a stored procedure – Functions: Create, Execute a function.

TEXT BOOK:

1. Database System Concepts 5th Edition - Abraham Silberschatz, Henry F.Korth, S.Sudarshan - McGraw-Hill Publication.Chapter 1.1 to 1.6, 2.1 to 2.6,3.1 to 3.10,4.1 to 4.3.
2. Learn Oracle 8i - Jose. A. Ramalho – B.P.B Publications. Chapter 6, 7, 9 to 12, 15 and 17.

REFERENCE BOOK:

Database system using oracle – Nilesh Shah – Prentice-Hall of India Private Limited.

VI SEMESTER			
C14	DATA COMMUNICATIONS AND NETWORKING	15UCSC61	
Hrs/Week: 6	Hrs/Sem: 6x15=90	Hrs./ Unit: 18	Credit: 5

Objectives:

- To learn fundamental concepts of data communication and networking technologies & topologies of LAN, MAN, and WAN in line with ISO OSI model.

UNIT I

Introduction - Data Communication – Networks – Protocols and Standards – Standards Organizations. Basic Concepts: Line Configuration – Topology – Transmission Mode – Categories of Networks – Internetworks.

The OSI Model: The model – Functions of the layers (Physical, Data Link, Network, Transport, Session, Presentation and Application Layers).

UNIT II

Transmission Media Guided media (Twisted – Pair Cable, Coaxial Cable, Optical Fiber) – Unguided media (Radio frequency Allocation, Propagation of Radio Waves, Terrestrial Microwave, Satellite Communication, Cellular Telephony).

UNIT III

DataLink Control: Line Discipline – Flow Control – Error Control. Network Layer Function: Circuit Switching – Packet Switching – Message Switching – Network Layer (Connection – Oriented and Connectionless services).

UNIT IV

LAN: Project 802, Ethernet – IEEE 802.3. CSMA/CD – Implementation -Token Bus – Token Ring – FDDI MAN:IEEE 802.6 (DQDB).

UNIT V

Transport Layer: Duties of the transport Layer .Session Layer: Session and Transport Interaction – Synchronization Points – Session Protocol Data Unit - Presentation Layer: Translation – Encryption /Decryption – Authentication Data Compression Application Layer: Message Handling system – File Transfer, Access and Management, Virtual Terminal, Directory Services, Common Management Information Protocol.

TEXT BOOK:

Introduction to Data communication and networking – Behrouz Forouzan - Tata Mcgraw Hill 2nd Edition, 2006.

REFERENCE BOOK:

Computer Networks – Andrew S. Tanenbaum, 4th Edition, PHI.

VI SEMESTER			
C15	VB.NET	15UCSC62	
Hrs/Week: 5	Hrs/Sem: 5x15=75	Hrs./ Unit: 15	Credit: 5

UNIT I

Introduction to VB.Net environment: The Visual Basic Integrated Development - Basic Language - Console application and windows application, Data types, Declaring Variables, operators and statements- Arrays - declaration and manipulation - Strings & string functions - Sub Procedures and Functions- Windows Applications - Forms - Adding Controls to Forms, Handling Events, MsgBox, InputBox, Handling Mouse & Keyboard Events, Handling Menus.

UNIT II

VB.NET controls - Working with Multiple Forms, Setting the Startup Form, SDI & MDI Forms, Common controls (Text Boxes, Rich Text Boxes, Labels, Buttons, Checkboxes, Radio Buttons, Group Boxes, List Boxes, Checked List Boxes, Combo Boxes, Picture Boxes, Scroll Bars, Tool Tips, Timers) properties – methods

UNIT III

Object Oriented Programming in VB.NET - Class and Objects, Properties, methods and events, Constructor and Destructor, Method overloading, Inheritance, Access modifiers: Public, Private, Protected, Friend, Overriding and shadowing, Interfaces, Polymorphism- Handling Exceptions - type of errors On Error GoTo - Raising an Exception - Throwing an Exception - Using Structured and Unstructured Exception Handling - Debugging and tracing.

UNIT IV

Web Application in VB.NET - Introduction to Web form, Page directive, all validation controls, Page redirection Concept of web services, Create a small web services

UNIT V

ADO.Net - Database: Connections, Data adapters, and datasets, Data Reader, Multiple Table Connection, Data binding with controls like Text Boxes, List Boxes, Data grid etc. Navigating data source, Data Grid View.

TEXT BOOK:

Visual Basic.NET Programming Black Book – Steven Holzner.

VI SEMESTER			
C16	PROJECT	15UCSP61	
Hrs/Week: 5	Hrs/Sem: 5x15=75	Hrs./ Unit: 15	Credit: 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 60% for the project and 40% for viva – voce.

Evaluation scheme:

The project will be evaluated by both Internal and External Examiners. Each Examiner will evaluate for 100 marks. The allocation of marks for project is as follows:

Project	Internal	External
Word of title	5	5
Objectives / Formulation including Hypothesis	5	5
Review of literature	10	10
Relevance of project to social needs	5	5
Methodology / Technique / Procedure adopted	20	20
Summary / Findings / Summation	5	5
Works cited / Annexure / Footnotes	10	10
Total	60	60

VI SEMESTER			
CE2 A	C # PROGRAMMING	15UCSE6A	
Hrs/Week: 5	Hrs/Sem: 5x15=75	Hrs./ Unit: 15	Credit: 6

UNIT I

Overview of C#: Introduction – simple C# program - Namespaces – comments – command line arguments – mathematical functions – Program structure – Literals – variables – data types – value types – reference types - scope of variables - boxing and unboxing - Operators and Expressions – conditional operators – bitwise operators – special operators – precedence of operators – type conversions

UNIT II

Decision making and branching – simple if – if..else – else if ladder – switch statement – conditional operator - decision making and looping – for, while, do, foreach statements – Jumps in loops . Handling arrays – one dimensional arrays – creating an array – two dimensional arrays – variable size arrays – System.Array Class – ArrayList Class – Manipulating Strings.

UNIT III

Methods in C# - declaring methods – Main method – invoking methods – nesting of methods – method parameters – pass by value – pass by reference – output parameters – variable argument lists – Structures and enumerations.

UNIT IV

Classes and Objects – member access modifiers – constructors – overloading constructors – destructors – This reference – Constant and Read only members – properties - Indexers – Inheritance and polymorphism – Containment inheritance – visibility Control – overloading methods - overriding methods – hiding methods - abstract classes – sealed classes – polymorphism.

UNIT V

Interfaces – multiple inheritance - Operator overloading – Delegate Declaration and Instantiation - Events – Managing Errors and Exceptions – Throwing our own exceptions – nested try blocks – Checked and Unchecked Operators.

TEXT BOOK:

Programming in C# - E. Balagurusamy- Third Edition - Tata McGraw Hill Education Ltd.

REFERENCE BOOK:

C# Complete Reference – Herbert Schildt – Tata McGraw Hill Education Ltd.

VI SEMESTER			
CE2 B	PC HARDWARE AND TROUBLE SHOOTING		15UCSE6B
Hrs/Week: 5	Hrs/Sem: 5x15=75	Hrs./ Unit: 15	Credit: 6

UNIT I

Introduction - Computer Organization – Number Systems and Codes – Memory – ALU- CU – Instruction prefetch – Interrupts – I/O Techniques – Device Controllers – Error Detection Techniques – Microprocessor – Personal Computer Concepts – Advanced System Concepts – Microcomputer Concepts – OS – Multitasking and Multiprogramming – Virtual Memory – Cache Memory – Modern PC and User.

Unit II Peripheral Devices:

Introduction – Keyboard – CRT Display Monitor – Printer – Magnetic Storage Devices – FDD – HDD – Special Types of Disk Drives – Mouse and Trackball – Modem – Fax Modem – CD ROM Drive – Scanner – Digital Camera – DVD – Special Peripherals.

Unit III PC Hardware Overview

Introduction – Hardware BIOS DOS Interaction – The PC family – PC hardware – Inside the System Box – Motherboard Logic – Memory Space – Peripheral Interfaces and Controllers – Keyboard Interface – CRT Display interface – FDC – HDC.

Unit IV Installation and Preventive Maintenance

Introduction – system configuration – pre installation planning – Installation practice – routine checks – PC Assembling and integration – BIOS setup – Engineering versions and compatibility – preventive maintenance – DOS – Virus – Data Recovery.

Unit V Troubleshooting

Introduction – computer faults – Nature of faults – Types of faults – Diagnostic programs and tools – Microprocessor and Firmware – Programmable LSI's – Bus Faults – Faults Elimination process – Systematic Troubleshooting – Symptoms observation and analysis – fault diagnosis – fault rectification – Troubleshooting levels – FDD, HDD, CDROM Problems.

TEXT BOOK:

B. Govindarajalu, IBM PC Clones Hardware, Troubleshooting and Maintenance”, 2/E, TMH, 2002.

REFERENCES:

1. Peter Abel, Niyaz Nizamuddin, IBM PC Assembly Language and Programming”, Pearson Education, 2007
2. Scott Mueller, Repairing PC's”, PHI, 1992

V & VI SEMESTERS			
CP-III	COMPUTER SCIENCE CORE PRACTICAL – III *		15UCSC6P1
Hrs/Week: 3	Hrs/Sem: 3x15=45	Hrs./ Unit: 15	Credit: 3

*** Examination at the end of VI semester**

J2EE PRACTICAL

1. Write a java code creates a connection to the access database on a hard disk using DSN named Bsc and display it message "Connected Success" if the connection is created.
2. Create a table with the following information Name, Subject, Qualification, Percentage in an Access database using the class Java.Sql.Package
3. 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

4. Simply fetch the table information using JDBC.
5. Program to update a particular Record Using JDBC.
6. Write a program to display record using prepared statement
7. Create a Servlet an simply display the message "Best Wishes to complete B.Sc(CS) Course Sucessfully" using Hyperlink.
8. Create a simple servlet using the getParameter() method and display the output in another form.
9. Write a servlet code to change the explorer background color.
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 JSP Program for Quiz
13. Write a program using Request and Out Objects in JSP.
14. Write a RMI Program to add a two numbers.
15. Write a Program for creation of simple client server application using RMI.

V & VI SEMESTERS			
CP-IV	COMPUTER SCIENCE CORE PRACTICAL – IV *		15UCSC6P2
Hrs/Week: 3	Hrs/Sem: 3x15=45	Hrs./ Unit: 15	Credit: 3

*** Examination at the end of VI semester**

VISUAL BASIC.NET PROGRAMMING PRACTICAL

1. Create a form having three radio buttons for age in year, age in days and age in months. Enter date of birth in a textbox and display appropriate result in another textbox. Also find date of death (assume average age of 72).
2. Create an application that ask you “how many nos you would like to enter = ”. Enter all the nos by Input box / text box (dynamic generate) when you click on ‘result’ button following things should be display. List box 1:original nos. List box 2: nos in ascending. List box 3: nos in descending. Label: the sum of all entered nos
Label: the average of all entered nos.
3. Create a multi line textbox that can accept any type of character.
 - On pressing a button ‘COUNT’ display total alphabets, numbers, and Special symbols In text.
4. Write a program for Picture animation using image lists
5. Write a program using menus and build in dialogs
6. Write a program using exception handling
7. Write a program that makes use of functions in VB.NET
8. Write a program deploying polymorphism using VB.NET
9. Write a program developing inheritance using vb.net
10. Create a web application having.
 - Login form: create login from with login, cancel, change password form.
 - Change password: use name, password, confirm password.
 - Check password change facility working or not successfully.
11. Create a web application using validation control
12. Write a program using page redirection concept
13. Create student information system.
 - Table: Student (grno, stud_name, dob, age, lastschool, fname, address, city, phone) Make a form to add, delete and update a record. Also give facility for navigation of record.
14. Create a program using data grid control

V & VI SEMESTERS			
CEP A	COMPUTER SCIENCE		15UCSE6AP
	CORE ELECTIVE PRACTICAL – A *		
Hrs/Week:3	Hrs/Sem: 3x15=45	Hrs./ Unit: 15	Credit: 3

*** Examination at the end of VI semester**

ELECTIVE: 1A - RDBMS with SQL server PRACTICAL (MySQL)

A) An Enterprise wishes to maintain the details about his suppliers and other corresponding details. For that he uses the following details.

Suppliers (sid: Integer, sname: string, address: string)

Parts (pid: Integer, pname: string, color: string)

Catalog (sid: integer, pid: integer, cost: real)

The catalog relation lists the prices charged for parts by suppliers.

Write the following queries in SQL:

1. Find the pnames of parts for which there is some supplier.
2. Find the snames of suppliers who supply every part.
3. Find the snames of supplier who supply every red part.
4. Find the pnames of parts supplied by London Supplier and by no one else.
5. Find the sid's of suppliers who charge more for some part than the average cost of that part.
6. For each part, find the sname of the supplier who charges the most for that part.
7. Find the sid's of suppliers who supply only red parts.
8. Find the sid's of suppliers who supply a red and a green part.
9. Find the sid's of suppliers who supply a red or green part.
10. Find the total amount has to pay for that supplier by part located from London.

An organisation wishes to maintain the status about the working hours made by his employees. For that he uses the following tables.

Emp (eid: integer, ename: string, age: integer, salary: real)

Works (eid: integer, did: integer, pct_time: integer)

Dept (did: integer, budget: real, managerid: integer)

B) An employee can work in more than one department; the pct_time field of the works relation shows the percentage of time that a given employee works in a given department. Resolve the following queries.

1. Print the names and ages of each employee who works in both Hardware and Software departments. 90 hrs (3 hrs/ week)
2. For each department with more than 20 full time equivalent employees (i.e., where the part-time and full-time employees add up to at least that many full-time employees), print the did's

- together with the number of employees that work in that department.
3. Print the name of each employee whose salary exceeds the budget of all of the departments that he or she work in.
 4. Find the managerid's of managers who manage only departments with budgets greater than 1,000,000.
 5. Find the enames of managers who manage the departments with largest budget.
 6. If a manager manages more than one department, he or she controls the sum of all the budgets for those departments. Find the managerid's of managers who control more than 5,000,000.
 7. Find the managerid's of managers who control the highest amount.
 8. Find the average manager salary.

ELECTIVE: 2A - C # PROGRAMMING PRACTICAL

1. Write a program to prepare electricity bill using switch statement.
2. Write a program to display all prime numbers between two given numbers.
3. Write a program to display a given number in words – use for each statement.
4. Write a program to find n factorial using recursion.
5. Write a program to implement constructor overloading.
6. Write a program to sort n numbers using method.
7. Write a program to perform matrix operations using object.
8. Write a program to implement user defined Exception.
9. Write a program to sort names using ArrayList class
10. Write a program to implement inheritance.
11. Write a program to implement operator overloading.
12. Write a program to implement polymorphism.
13. Write a program to implement interfaces.
14. Write a program to implement overriding methods and hiding methods.
15. Write a program to copy contents of a file to two different destinations.

V & VI SEMESTERS			
CEP A	COMPUTER SCIENCE		15UCSE6BP
	CORE ELECTIVE PRACTICAL – B *		
Hrs/Week:3	Hrs/Sem: 3x15=45	Hrs./ Unit: 15	Credit: 3

*** Examination at the end of VI semester**

ELECTIVE: 1B - RDBMS WITH 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

ELECTIVE: 2B - PC TROUBLE SHOOTING

1. Partitioning and Formatting Hard Disk
2. Configure your personal computer
3. Testing Monitor and Keyboard
4. Testing Serial Port and Parallel Port
5. Testing of Computer SMPS
6. FDD fault finding
7. HDD, CD ROM fault finding
8. Identifying PC problem
9. Installing Antivirus software
10. Install the printer driver and self test
11. Connect more than one hard disk
12. Install MS OFFICE 2007
13. Clearing CMOS password

B.Sc. (Computer Science) - CBCS SYLLABUS (2015 – 2018)			
PART III – ALLIED I – COMPUTER APPLICATION			
I SEMESTER			
AI-1	OFFICE AUTOMATION		15UCAA11
Hrs/Week: 3	Hrs/Sem: 3 X 15 = 45	Hrs./ Unit: 9	Credit: 4

UNIT I Documentation Using MS-Word:

Introduction to Office Automation, Creating & Editing Document, Formatting Document, Auto-text, Autocorrect, Spelling and Grammar Tool, Document Dictionary, Page Formatting, Bookmark.

UNIT II Advance MS-Word:

Advance Features of MS-Word [Mail Merge, Macros], Tables, File Management, Printing, Styles, linking and embedding object, Template.

UNIT III Electronic Spread Sheet using MS-Excel:

Introduction to MS-Excel, Creating & Editing Worksheet, Formatting and Essential Operations, Formulas and Functions, Charts,

UNIT IV Advance features of MS-Excel :

Pivot table & Pivot Chart, Linking and Consolidation, Database Management using Excel- Sorting, Filtering, Table, Validation, Goal Seek, and Scenario.

UNIT V Presentation using MS-PowerPoint:

Presentations, Creating, Manipulating & Enhancing Slides, Word Art, Layering art Objects, Animations and Sounds, Inserting Animated Pictures or Accessing through Object, Inserting Recorded Sound Effect or In-Built Sound Effect.

TEXT BOOK :

Microsoft Office – Complete Reference – BPB Publication

REFERENCE BOOK :

Learn Microsoft Office – Russell A. Stultz – BPB Publication.

II SEMESTER			
A2	WEB GRAPHIC DESIGN	15UCAA21	
Hrs/Week: 3	Hrs/Sem: 3 X 15 = 45	Hrs./ Unit: 9	Credit: 4

UNIT I FLASH

How flash works – Introducing the Flash Workspace - Panels – Tools – Timeline – Frames – Concept of frames – Scenes in Flash – Layers in Flash – Testing a flash movie – Publishing a flash movie

UNIT II FLASH

Working with Color – Color Swatches Panel - Color Mixer Panel - Symbols – Creating Symbols and instances – Creating a button – Editing symbols – Modifying the instance of a symbol – Library – Using the library – Using the Common Library.

UNIT III FLASH

Animation – Working with Time line effects – Using the Explode Timeline Effect - Frame by Frame Animation Technique – Tweening: Motion and shape Tweening – Creating masking effects – Action Scripts – Programming concept in Action Script – Movie clips

UNIT IV DREAMWEAVER

Working with Layers – Behavior – Working with Templates – Working with HTML – Adding video and media to WebPages – Assets, Library and History Panel –

UNIT V DREAMWEAVER

Insert a picture – Insert a page – How will insert a background picture – Creating lists – Creating a behavior – Customizing Dreamweaver

TEXT BOOK

1. DreamWeaver 4 Bible by Joseph W.Lowery
2. Flash 8 in Simple steps,Salini Gupta and adity gupta,Dreamtech press

I & II SEMESTER		
AI-P	ALLIED I – PRACTICAL *	15UCAAP
Hrs/Week: 3	Hrs/Sem: 45	Credit: 2

*** Examination at the end of II semester**

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.
7. create a table

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.
5. Create a list of data using sorting
6. create a list of data using validation option

WEB GRAPHIC DESIGN

FLASH

1. Make an object and change the color of an object
2. Draw a path an object should follow
3. Create a button and add a URL to it so it becomes a link.
4. Create a Draggable Movie Clip
5. Play a Video File

DREAMWEAVER

6. Load a image
7. Set the image as a background
8. Add a video and audio to the webpage

III SEMESTER			
AII 1	UNIX AND SHELL PROGRAMMING	15UCA31	
Hrs/Week: 3	Hrs/Sem: 3 X 15 = 45	Hrs./ Unit: 9	Credit: 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 :

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

REFERENC BOOK :

UNIX Concepts and Applications by Sumitabha Das –Tata McGraw Pub. Company Ltd 3rd Edition.

IV SEMESTER			
AII 2	ACTIVE SERVER PAGES	15UCA41	
Hrs/Week: 3	Hrs/Sem: 3 X 15 = 45	Hrs./ Unit: 9	Credit: 4

UNIT I

Introduction: What is ASP? – ASP Model – The Process of Serving an Active Sever Page – Using Scripting Languages – Understanding Objects – Application Object – Request Object – Response Object – Server Object – Session Object.

UNIT II

Components: The Advertisement Rotator Component – The Browser Capabilities Component – The TextStream Component – The Input Box Function – The MsgBox Function.

Unit III

Working with Html: Retrieving Form Data – Using Text Boxes and Text Areas – Using Radio Buttons and Check boxes – Using Select Lists – Validating Form Data.

UNIT IV

Cookies: Working with Cookies – Application of Cookies – Drawbacks of using Cookies – Using Cookies in ASP Applications – Working with Files and the File System – Working with Drives and Folders.

UNIT V

Connections and Data Sources: Connecting to Microsoft SQL Server – connecting to a Microsoft Access Database – Connection Object – Executing a SQL Statement with the Connection Object – Working with Record Sets – Recordset Cursor and Locking Types.

TEXT BOOK

Ivan Bayross, 'Practical ASP',BBP Publications

III & IV SEMESTERS		
AII P	ALLIED II - PRACTICAL *	15UCAAP
Hrs/Week: 3	Hrs/Sem: 45	Credit: 2

*** Examination at the end of IV semester**

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. i. Counting number of lines before and after updating the file
ii. Checking file access permission.
iii. File Comparison.
iv. Implementing copy, move command
9. i. Checking Validity of user
ii. Listing contents of directory
iii. Removing directory.
iv. Granting and revoking permissions for user, and others.

ACTIVE SERVER PAGES PRACTICAL

1. Demonstration of Cookies.
2. Write a ASP program to store username and password into session.
3. Write a ASP program to check whether username and password are valid or invalid.
4. Demonstration of Query String.
5. Write a ASP program to insert a record into the table.
6. Write a ASP program to update a record into the table.
7. Write a ASP program to delete record from the table.
8. Write a ASP program to count the number of visitors for the particular web page.
9. Demonstration of events.
10. Write a ASP program to copy the contents of file into another file.
11. Write a ASP program to move and delete the specified file.
12. Write a ASP program to write and read the contents of a file.
13. Demonstration of Drives.
14. Demonstration of Folder.

B.Sc. (Computer Science) - CBCS SYLLABUS			
PART IV – SKILL-BASED ELECTIVE			
III SEMESTER			
SBE 1	OPERATIONS RESEARCH	15UCSS31	
Hrs/Week: 3	Hrs/Sem: 3 x 15 = 45	Hrs./ Unit : 9	Credit: 2

UNIT I Simplex Method:

Different forms of Linear Programming Problem – Basic solution, Degenerate solution, Non-Degenerate solution, Basic feasible solution, Improved BFS, Optimum BFS – Minimax Theorem of LPP – Slack, Surplus, Restricted and Unrestricted variables – Bounded and Unbounded solution – The Simplex Algorithm for solving a LPP – The simplex method of solving a LPP.

UNIT II Theory of Games:

Introduction – payoff matrix, fair game, strictly determinable game – Two person zero sum games – The Maximin Minimax principle of game theory – Games without saddle points – Mixed strategies – Graphical solution of 2 X N and M X 2 games – Dominance property – Modified Dominance property.

UNIT III Replacement Problem:

Introduction – Replacement of items that Deteriorate with time – Replacement of Items whose Maintenance costs increase with time and the value of money also changes with time – Replacement of items that fail completely – Individual Replacement policy – Group Replacement policy – Mortality and Staffing problem.

UNIT IV Network Scheduling by PERT / CPM:

Introduction – Basic concepts: Activities, Nodes, Network, Critical path – Constraints in Networks – Construction of the Network – Various Time calculations in Networks, Critical path calculations – Procedure of determining the Critical Path – critical and non-critical activities – Slack and Floats determinations — PERT – PERT calculations.

UNIT V Queuing Theory:

Introduction – Characteristics of queuing systems – Basic queuing process – Customer’s behaviours in the queue – Postulate for the Poisson process – Distribution of arrival time – Distribution of service time – Symbols and Notations – Definition of Transient and Steady states – Classification of Queues – Basic characteristic of model one – Problems in infinite queue, infinite source and single server model.

TEXT BOOK:

Operations Research – P.K.Gupta, Kanti Swarup and Man Mohan, Sultan Chand & Sons Publications.

REFERENCE BOOKS:

1. Operations Research – J.A. Mangaladoss, Presi – Persi Publications
2. Operations Research – R.Paneer Selvam, Prentice Hall of India .

B.Sc. (Computer Science) – CBCS SYLLABUS (2015 – 2016)			
PART IV – SKILL-BASED ELECTIVE			
IV SEMESTER			
SBE 2	QUANTITATIVE APTITUDE AND TEST OF REASONING		15UCSS41
Hrs/Week: 3	Hrs/Sem: 3 x 15 = 45	Hrs./ Unit : 9	Credit: 2

UNIT I

Profit and loss – Ratio and Proportion.

UNIT II

Time and Work – Time and Distance

UNIT III

Chain Rule – Probability.

UNIT IV

Blood Relations – Puzzle Tests

UNIT V

Direction Sense Test – Alphabet Test

TEXT BOOK:

1. Quantitative Aptitude by R.S. Aggarwal.
2. Test of Reasoning by R.S. Aggarwal.

B.Sc. (Computer Science) - CBCS SYLLABUS (2015 – 2016)			
PART IV - NON-MAJOR ELECTIVE (Offered by the Department of Computer Science to other Major Students)			
III SEMESTER			
NME 1	OFFICE AUTOMATION	15UCSN31	
Hrs/Week: 3	Hrs/Sem: 3 x 15 = 45	Hrs./ Unit : 9	Credit: 2

UNIT I Documentation Using MS-Word:

Introduction to Office Automation, Creating & Editing Document, Formatting Document, Auto-text, Autocorrect, Spelling and Grammar Tool, Document Dictionary, Page Formatting, Bookmark.

UNIT II Advance MS-Word:

Advance Features of MS-Word [Mail Merge, Macros], Tables, File Management, Printing, Styles, linking and embedding object, Template.

UNIT III Electronic Spread Sheet using MS-Excel:

Introduction to MS-Excel, Creating & Editing Worksheet, Formatting and Essential Operations, Formulas and Functions, Charts.

UNIT IV Advance features of MS-Excel:

Pivot table & Pivot Chart, Linking and Consolidation, Database Management using Excel Sorting, Filtering, Table, Validation, Goal Seek, and Scenario.

UNIT V Presentation using MS-PowerPoint:

Presentations, Creating, Manipulating & Enhancing Slides, Word Art, Layering art Objects, Animations and Sounds, Inserting Animated Pictures or Accessing through Object, Inserting Recorded Sound Effect or In-Built Sound Effect.

TEXT BOOK :

Microsoft Office – Complete Reference – BPB Publication

REFERENCE BOOK :

Learn Microsoft Office – Russell A. Stultz – BPB Publication

IV SEMESTER			
(Offered to other Under Graduate Courses Students)			
NME 2	DESKTOP PUBLISHING	15UCSN41/ 15UCAN41	
Hrs/Week: 3	Hrs/Sem: 3 x 15 = 45	Hrs./ Unit : 9	Credit: 2

*** Common to Department of Computer Science and Department of Computer Application**

Objectives:

To provide the basic methodologies and techniques in Desktop Publishing.

UNIT I

Hardware Requirements for DTP – Beginning a Design – Design Considerations – Text Organization – Designing Common Media Publications.

UNIT II

PageMaker : Getting Started with PageMaker – Editing Text. PageMaker : Formatting Text – Master Pages – Creating Master Pages – Applying, Removing and Editing a Master Page.

UNIT III

Creating a New Publication – Working with columns. Working with Graphics and Objects – Managing and Printing a Publication.

UNIT IV

Photoshop: Getting Started with Photoshop: Opening and Existing File – Creating a New File – Saving, Reverting and Closing Files – Working with Images and Colors – Selection Tools – Painting Tolls – Drawing Tolls – Editing Tools – Eraser Tools.

UNIT V

Understanding Layers : Working with Layers – Applying Layer Styles – Fill and Adjustment Layers – Exploring Layer components – What are Masks? Using Layer Masks – Merging and Flattening Layers.

TEXT BOOKS:

Vikas Gupa, Desktop Publishing Course Kit, Dreamtech Press, 2005.

REFERENCE BOOKS

1. Mastering Page Maker6 for windows 95 –by Rebecca Bridges Altman & Rick Altman
2. Photoshop 4 Studio skills by Steven Moniz.

PART IV – NON-MAJOR ELECTIVE (AIDED COURSES) (2015 – 2018)							
SEM	TITLE OF THE PAPER	S.CODE	H/W	C	MARKS		
					I	E	T
DEPT. OF ENGLISH							
III	<i>Computer Assisted Language Learning: Reading & Writing</i>	15UENN31	3	2	25	75	100
IV	<i>Computer Assisted Language Learning: Listening & Speaking</i>	15UENN41	3	2	25	75	100
DEPT. OF HISTORY							
III	<i>Modern Constitution – I</i>	15UHSN31	3	2	25	75	100
IV	<i>Modern Constitution – II</i>	15UHSN41	3	2	25	75	100
DEPT. OF MATHEMATICS							
III	<i>Mathematics for Competitive Examinations – I</i>	15UMAN31	3	2	25	75	100
IV	<i>Mathematics for Competitive Examinations – II</i>	15UMAN41	3	2	25	75	100
DEPT. OF PHYSICS							
III	<i>Basic Physics – I</i>	15UPHN31	3	2	25	75	100
IV	<i>Basic Physics - II</i>	15UPHN41	3	2	25	75	100
DEPT. OF CHEMISTRY							
III	<i>Water Management</i>	15UCHN31	3	2	25	75	100
IV	<i>Applied Chemistry</i>	15UCHN41	3	2	25	75	100
DEPT. OF ZOOLOGY							
III	<i>Ornamental Fish culture</i>	15UZON31	3	2	25	75	100
IV	<i>Apiculture</i>	15UZON41	3	2	25	75	100
DEPT. OF COMPUTER SCIENCE							
III	<i>Office Automation</i>	15UCSN31	3	2	25	75	100
IV	<i>Desktop Publishing</i>	15UCSN41	3	2	25	75	100
DEPT. OF COMMERCE							
III	<i>Principles of Commerce</i>	15UCON31	3	2	25	75	100
IV	<i>Basics in Accounting*</i>	15UCON41	3	2	25	75	100

* Common to Department of Commerce and Department of Commerce (CA)

I SEMESTER			
EVS	ENVIRONMENTAL STUDIES		15UEVS11
Hrs/ Week: 2	Hrs/ Sem: 30	Hrs/ UNIT: 6	Credits: 1

UNIT - I: Nature of Environmental Studies

Goals, Objectives and guiding principles of environmental studies. Towards sustainable development - Environmental segments- Atmosphere, Hydrosphere, Lithosphere, Biosphere – definition. Pollution episodes -- Hiroshima – Nagasaki, - Bhopal gas Tragedy, Fukushima – Stone leprosy in Taj Mahal

UNIT - II: Natural Resources

Renewable and Non Renewable resources - classification.

- Forest resources: Use and over - exploitation, Aforestation and deforestation.
- Water resources: Use and over - utilization and conservation of surface and ground water - Rain harvesting.
- Marine Resources: Fisheries and Coral reefs.
- Mineral resources: Use and exploitation - environmental impacts of extracting and using mineral resources.
- Food resources: Effects of modern agriculture fertilizers - pesticide problem.
- Energy resources: Growing energy needs - use of alternate energy source - Solar cells & wind mills.
- Land resources: Land degradation

UNIT - III: Ecosystem

- Concept of Eco-systems - Tropic level, food chains, food web and Ecological pyramids. Types, structure & Functions of the following:
 - a) Aquatic ecosystem
 - b) Grassland ecosystem
 - c) Forest ecosystem
 - d) Desert ecosystem
 - e) Living conditions on other planets (Briefly)

UNIT - IV: Biodiversity & Its Conservation

Introduction - Definition: eco system diversity, species and Genetic Hot spots of biodiversity - Western Ghats, Eastern Himalayas and Gulf of Mannar. Threats to biodiversity - Habitual Loss, Poaching of wild life and Man - wild life conflicts.

Conservation of biodiversity: Insitu and ex-insitu.

UNIT - V: Environmental Pollution

Sources, effects, prevention and control measures of the following.

- a) Air pollution: Composition of clean air, Global warming, Ozone layer depletion.
- b) Water Pollution: Fresh and Marine water pollution
- c) Noise Pollution
- d) Soil pollution
- e) Bio degradable and Non Bio degradable wastes
 - Air (prevention & Control of Pollution) Act.
 - Environmental Protection Act
 - Water (Prevention & Control of pollution) Act
 - Environmental movements - Green peace and Chipco,
 - Role of State & Central pollution Control Boards.

REFERENCE BOOKS:

1. Basic of Environmental Science. Vijajalakhmi, Murugesan and Sukumaran - Manonmaniam Sundaranar University publications.
2. Environmental Studies. John de Brito, Victor, Narayanan and Patric Raja - published by St. Xavier's College, Palayamkottai.
3. Environmental Science and Biotechnology. A.G. Murugesan and C. Raja Kumar - MJP Publishers.
4. Fundamental of Environmental pollution - Krishnan Kannan - Chand & Company Ltd., New Delhi 1997.
5. Environmental Studies. S. Muthiah, Ramalakshmi publications, Tirunelveli.
6. Environmental Studies. V.M. Selvaraj, Bavani Publications, Tirunelveli.

II SEMESTER			
VE1	VALUE EDUCATION – I		15USVE2A
Hrs/ Week: 2	Hrs/ Sem: 30	Hrs/ Unit: 6	Credits: 1

Objectives:

1. To inculcate moral values in the minds of students.
2. To teach ethical practices to be adopted by students in their life.
3. To make students honest and upright in their life.

UNIT I

Islam – Meaning – Importance – A complete Religion – The religion accepted by God – Five Pillars of Islam – Kalima – Prayers – Fasting – Zakat – Haj.

Iman – Monotheism – Angels – Books – Prophets – Dooms Day – Life after death – Heaven and Hell.

UNIT II

Quran – The Book of Allah – Wahi – Revelation to Prophet Muhammad(sal) – Compilation – Preservance – Structure – Content – Purpose – Source of Islamic Law– Sura Fathiha , Kafirun, Iqlas, Falakh and Nas.

UNIT III

Hadith – Siha Sitha – Buhari – Muslim – Tirmithi – Abu Dawood – Nasai – Ibn Maja – Collection of Hadith – Meaning of 40 Hadith.

UNIT IV

Life History of Prophet Muhammad (sal) – Aiamul Jahiliya – Prophet’s Childhood and Marriage – Prophethood – Life at Mecca – Life at Medinah – Farewell Address – Seal of Prophethood.

UNIT V

Good character – Etiquettes – Halal and Haram – Duties towards Allah – Duties towards fellow beings – Masnoon Duas.

REFERENCE BOOKS:

1. V.A. Moahmed Ashrof – Islamic Dimensions – Reflection and Review on Quranic Themes.
2. The Presidency of Islamic Researchers – Revised & Edited – The Holy Quran.
3. M. Manzoor Nomani – Islamic Faith & Practice.
4. Abdul Hasan Ali Nadvi – Muhammad Rasulullah.
5. K. Ali – A Study of Islamic History.
6. Abdul Rahuman Abdullah – Islamic Dress code for Women.
7. Dr. Munir Ahamed Mughal – Code For Believers.
8. Abdul Malik Mujahid – Gems and Jewels.

II SEMESTER			
VE2	VALUE EDUCATION – II		15USVE2B
Hrs/ Week: 2	Hrs/ Sem: 30	Hrs/ Unit: 6	Credits: 1

UNIT I

Individual Morality – Objective of Moral life – Living in accordance with the code of Morality – the goodness of Morality – Morality and *Thirukural*- The need for faith.

UNIT II

Adherence to higher code of Morality – Fear of God – Good Moral Values – Duty to Parents – Teacher, respecting elders – Moral Etiquettes – Right-minded Principle – High Principles for Proper conduct.

UNIT III

Inculcating good attitudes – Open mindedness – Morale – analysing the pros and cons of good and bad – Service to others – Mind Power, tolerance, respecting others, showing love to others, patience – tranquility – Modesty, kindness and forgiveness.

UNIT IV

Quotations and moral Stories expressing Good characters of Great personalities – Life History of Great people: Mahatma Gandhi, Abraham Lincoln, Dr. A.P.J. Abdul Kalam.

UNIT V

Truth, the importance of uprightness, integrity, friendship – Health awareness on Alcohol and drug abuse – inculcating reading habit – reading good books – Hygiene – Dowry – Corruption.

TEXTBOOK:

Publication of Sadakathullah Appa College.

SCHEME OF EXAMINATIONS UNDER CBCS (2015 - 2018)

The medium of instruction in all UG and PG courses is English and students shall write the CIA Tests and Semester Examinations in English. However, if the examinations were written in Tamil, the answer papers will be valued.

DISTRIBUTION OF MARKS FOR CIA AND SEMESTER EXAMINATIONS UNDERGRADUATE, CERTIFICATE & DIPLOMA COURSES

SUBJECT	TOTAL MARKS	CIA TEST	SEMESTER EXAMINATION	PASSING MINIMUM		
				CIA TEST	SEM. EXAM.	OVER ALL
Theory	100	25	75	Nil	30	40
Practical	100	40	60	Nil	24	40
Project	100	Nil	Report - 60 marks Viva Voce - 40 marks	Nil	40	40

POSTGRADUATE COURSES

SUBJECT	TOTAL MARKS	CIA TEST	SEMESTER EXAMINATION	PASSING MINIMUM		
				CIA EXAM.	SEM. EXAM.	OVER ALL
Theory	100	25	75	nil	38	50
Practical	100	40	60	nil	30	50
Project	100	nil	Report - 60 marks Viva Voce - 40 marks	nil	50	50

DIVISION OF MARKS FOR CIA TEST

SUBJECT	MARKS	ASSIGNMENT FOR UG / ASSIGNMENT OR SEMINAR FOR PG	REGULARITY	RECORD NOTE	TOTAL MARKS
Theory	20	5	--	--	25
Practical	30	--	5	5	40

1. The duration of each CIA Test is ONE hour and the Semester Examination is THREE hours.
2. Three CIA tests of 20 marks each will be conducted and the average marks of the best two tests out of the three tests will be taken.
3. The I test will be based on the first 1.5 units of the syllabus, the II test will be based on the next 1.5 units of the syllabus and the III test will be based on the next 1.5 units of the syllabus.
4. Two assignments for Undergraduate, Certificate, Diploma and Advanced Diploma Courses and two assignments OR two seminars for Postgraduate Courses.
5. The duration and the pattern of question paper for practical examination may be decided by the respective Boards of Studies. However, out of 60 marks in the semester practical examination, 10 marks may be allotted for record and 50 marks for practical.
6. Three internal practical tests of 25 marks each will be conducted for science students in the even semester and the best two out of the three will be taken. The total 50 marks of the best two tests will be converted to 30 by using the following formula:

$$\left(\begin{array}{c} \text{Marks secured in the first best Practical Test (Out of 25)} \\ + \\ \text{Marks secured in the next best Practical Test (out of 25)} \end{array} \right) \times 0.6$$
7. The Heads of Science Departments are requested to keep a record of attendance of practicals for students to assign marks for regularity.

QUESTION PAPER PATTERN FOR CIA TEST (THEORY)

Duration: 1 Hr

Maximum Marks: 20

Section	Question Type	No. of Questions & Marks	Marks
A	No Choice Answer should not exceed 75 words	2 Questions 2 marks each	2 x 2 = 4
B	Internal choice (Either or type) Answer should not exceed 200 words	2 Questions 4 marks each	2 x 4 = 8
C	Open Choice (Answer ANY ONE out of Two) Answer should not exceed 400 words	1 Question 8 marks	1 x 8 = 8
TOTAL			20 MARKS

QUESTION PAPER PATTERN FOR SEMESTER EXAMINATION (THEORY)

Duration: 3 Hrs

Maximum Marks: 75

Section	Question Type	No. of Questions & Marks	Marks
A	No Choice Answer should not exceed 75 words	10 Questions - 2 marks each (2 Questions from each unit)	10 x 2 = 20
B	Internal choice (Either or type) Answer should not exceed 200 words	5 Questions with internal choice. Each carries 5 marks (Two questions from each unit)	5 x 5 = 25
C	Open Choice (Answer ANY THREE out of FIVE) Answer should not exceed 400 words	3 Questions out of 5 - 10 marks each (1 Question from each unit)	3 x 10 = 30
TOTAL			75 MARKS