HOLY CROSS COLLEGE (AUTONOMOUS), TIRUCHIRAPALLI – 620 002.
DEPARTMENT OF COMPUTER SCIENCE CHOICE BASED CREDIT SYSTEM
BACHELOR OF COMPUTER APPLICATIONS

(For Candidates admitted from June 2014 Onwards)

Semester	Part	Course	Title of the Course	Code	Hrs/Wk	Credits	Marks
I	I	Language	Tamil Paper I / Hindi Paper I/ French Paper I	U12TL1TAM01 U14HN1HIN01 U13FR1FRE01	6	3	100
	II	English	English Paper I	U10EL1GEN01	6	3	100
	III	Major Core-1	Advanced Programming in C (Theory cum Lab)	U14CA1MCT01	7	6	100
		Allied-1 (Compulsory)	Digital Computer Fundamentals	U14CA1ACT01	4	3	100
	III	Allied-2 (Compulsory)	Allied PaperII Applied Mathematics	U08MA1ACT05	4	3	100
	IV	Environmental Studies	Environmental Studies	U14RE1EST01	2	2	100
	IV	Value Education	Ethics I/ Bible Studies I/ Catechism I	U12VE2LVE01 U12VE2LVB01 U12VE2LVC01	1	-	-
			TOTAL		30	20	600
II	I	Language	Tamil Paper II/ Hindi Paper II/ French Paper II	U12TL2TAM02 U14HN2HIN02 U13FR2FRE02	5	3	100
	II	English	English Paper II	U10EL2GEN02	6	3	100
	III	Major Core-2	Data Structures and Algorithms	U14CA2MCT02	5	5	100
	III	Major Core-3	Data Structures Lab	U14CA2MCP03	5	4	100
	III	Allied-3 (Compulsory)	Allied Paper III Applied MathematicsII	U08MA2ACT11	4	3	100
	IV	Skill Based Elective-1	Soft Skill Development	U14RE2SBT01	2	2	100
	IV	Skill Based Elective-2	Rural Enrichment and Sustainable Development	U08RE2SBT02	2	2	100
	IV	Value Education	Ethics I/ Bible Studies I/ Catechism I	U12VE2LVE01 U12VE2LVB01 U12VE2LVC01	1	1	100
			TOTAL		30	23	800
III	I	Language	Tamil Paper III/ Hindi Paper III/ French Paper III	U12TL3TAM03 U14HN3HIN03 U14FR3FRE03	6	3	100
	II	English	English Paper III	U10EL3GEN03	6	3	100
	III	Major Core-4	Database Systems	U11CA3MCT04	5	5	100
	III	Major Core-5	RDBMS Lab	U13CA3MCP05	5	5	100
	III	Allied-4 (Optional)	Allied Optional Paper I Applied Mathematics III	U11MA3AOT13	4	3	100
	IV	Skill Based Elective-3	Multimedia and Animation Lab	U13CA3SBP03	2	2	100
	IV	Gender Studies	Gender Studies	U12WS3GST01	1	1	100
	IV	Value Education	Ethics II/ Bible Studies II/ Catechism II	U12VE4LVE02 U12VE4LVB02 U12VE4LVC02	1	-	-
			TOTAL		30	22	700
	I	Language	Tamil Paper IV/ Hindi Paper IV/ French PaperIV	U12TL4TAM04 U14HN4HIN04 U14FR4FRE04	5	3	100

	II	English	English Paper IV	U13EL4GEN04	6	3	100
IV	III	Major Core-6	Java Programming	U12CA4MCT06	5	5	100
	III	Major Elective-1	Java Programming Lab / System Analysis and Design/ Software Project Management	U12CA4MEP01/ U14CA4MET01/ U14CA4MET02	5	5	100
	III	Allied-5 (Optional)	Basics of accounting	U12CO4AOT08	4	4	100
	III	Allied-6 (Optional)	Accounting package lab– tally	U12CA4AOP03	4	3	100
	IV	Value Education	Ethics II/ Bible Studies II/ Catechism II	U12VE4LVE02 U12VE4LVB02 U12VE4LVC02	1	1	100
			TOTAL		30	24	700
V	III	Major Core-7	Computer Organization and Architecture	U14CA5MCT07	5	4	100
	III	Major Core-8	Visual Programming	U13CA5MCT08	5	4	100
	III	Major Core-9	Computer Networks	U12CA5MCT09	5	4	100
	III	Major Core-10	Visual Programming Lab	U13CA5MCP10	5	4	100
	III	Major Elective-2	Computer Graphics /Dot Net / Mobile Computing	U14CA5MET03/ U14CA5MET04/ U14CA5MET05	5	5	100
	IV	Non Major Elective-1	Desktop Publishing Lab	U11CA5NMP01	2	2	100
	IV	Skill Based Elective-4	Quantitative Aptitude	U14CA5SBT04	2	2	100
	IV	Value Education	Ethics III/ Bible Studies III/ Catechism III	U13VE6LVE03 U12VE6LVB03 U12VE6LVC03	1	-	-
			TOTAL		30	25	700
VI	III	Major Core-11	Operating Systems	U14CA6MCT11	6	5	100
	III	Major Core-12	Web Application Development Tools Lab	U14CA6MCP12	6	5	100
	III	Major Core-13	Project Work	U14CA6MCPW1	6	5	100
	III	Major Elective-3	Software Engineering/ Data Mining and Warehousing / PHP ScriptingLanguage	U14CA6MET06/ U14CA6MET07/ U14CA6MET08	5	5	100
	IV	Non Major Elective-2	Multimedia Lab	U13CA6NMP02	2	2	100
	IV	Skill Based Elective-5	Office Tools Lab	U13CA6SBP05	2	2	100
	IV	Skill Based Elective-6	Research Methodology	U13DS6SBT06	2	2	100
	IV	Value Education	Ethics III / Bible Studies III/ Catechism III	U13VE6LVE03 U12VE6LVB03 U12VE6LVC03	1	1	100
	V	Extension Activity	RESCAPES-Impact Study of Project	U08RE6ETF01	-	1	100
			TOTAL		30	28	900
			GRAND TOTAL		180	141	4400
			ED : Extra Credit (Compulsory) : Mini Project	U18CA6ECP01		2	100

List of Allied Optional Courses Offered by the Department to Other Students

Semester	Part	Course	Title of the Course	Code	Hrs/Wk	Credits	Marks
IV	III	Allied-6 (Optional)	Allied Optional Paper III Accounting Package Lab – Tally (for BCA) /	U12CA4AOP03	4	3	100
			Multimedia and its Applications	U12CA4AOT03	4	3	100

List of Non Major Elective Courses

Semester	Part	Course	Title of the Course	Code	Hrs/Wk	Credits	Marks
V	IV	Non Major Elective-1	Desktop Publishing Lab	U11CA5NMP01	2	2	100
VI	IV	Non Major Elective-2	Multimedia Lab - Photoshop	U13CA6NMP02	2	2	100

HOLY CROSS COLLEGE (Autonomous), Tiruchirappalli - 620 002.
TAMIL DEPARTMENT
BA/ B.SC/ B.COM DEGREE
Part - I : Language: Tamil Paper - 1

Hrs /Wk : 6   Code : U12TL1TAM01
Credit   : 3   Marks: 100

நோக்கங்கள்:

1. தாய்மொழியை வலுவோடும், பொலிவோடும் கையாளும் வழி முறைகளைக் கண்டறியச் செய்தல்.

2. தமிழ் இலக்கியப் பரப்பையும், பாரம்பரியத்தையும் அறிமுகப்படுத்துதல்.

3. படைப்பாற்றலை வளர்த்துக் கொள்ள ஊக்கம் அளித்தல்.

4. உயர்ந்த பண்பாடுகளின் அடிப்படையில் வாழ்க்கையை அமைத்துக் கொள்ளும் உள்ளார்ந்த விருப்பத்தைத் தோற்றுவித்தல்.

5. மனித உரிமைகளை வலியுறுத்தி மனித நேயத்தை வளர்த்தல்.

6. நாம் வாழும் நாட்டையும், உலகையும் பற்றிய விழிப்புணர்வை ஊட்டி சமய நல்லிணக்கத்தையும், சமூக நல்லுறவையும் பேணிக்காக்கத் துணைப்புரிதல்.

7. ஆரோக்கியமான சிந்தனைகள் வளர ஆக்கம் அளித்தல்.

பயன்கள்:

1. தற்காலத் தமிழ் இலக்கிய வரலாற்றை வளர்க்க வழிகாட்டல்.

2. மாணவர்களின் தன்னம்பிக்கையை வளர்த்தல்

3. வாழ்வியல் நெறிகளை உணர்த்தல்.

4. பிழையின்றி எழுத பேச பயிற்சி அளித்தல்.

பாடத்திட்டம்

அலகு:1 செய்யுள்
மொழி
கல்வி
வீரம்

அலகு:2 செய்யுள்
அறம்
வாழ்க்கை

அலகு:3

     தமிழ் இலக்கிய வரலாறு

     20-ஆம் நூற்றாண்டு (தற்காலம்)

     தமிழாய்வுத்துறை வெளியீடு

அலகு:4

     படைப்பிலக்கியம்   - சிறுகதைத் தொகுப்பு

அலகு:5

     பொதுப்பகுதி   - கலைச்சொற்கள்

     தமிழாய்வுத்துறை வெளியீடு

பாட நூல்கள்

செய்யுள்   - தமிழாய்வுத்துறை வெளியீடு

தமிழ் இலக்கிய வரலாறு   - தமிழாய்வுத்துறை வெளியீடு

சிறுகதைத் தொகுப்பு   - தமிழாய்வுத்துறை வெளியீடு

கலைச்சொற்கள்   - தமிழாய்வுத்துறை வெளியீடு

HOLY CROSS COLLEGE (AUTONOMOUS) TIRUCHIRAPPALLI-620002
DEPARTMENT OF HINDI
PART – I LANGUAGE HINDI FOR B.A, B.Sc & B.Com
HINDI PAPER-I SHORT STORY, PROSE, GRAMMAR
SEMESTER – I

Hrs/Week : 6   **Code: U14HN1HIN01**
Credits : 3   **Marks : 100**

UNIT I : Purasakar, Sukamaya Jeevan, Ganga Singh, Machuye Ki Beti,Maharaj KaIlaj

UNIT- II: Maatru vandana, Chandini, Thitalii, Divali, Seekho.

UNIT-III: Sadak Ke Niyam, Bhagavan mahaveer, Prithvi Kawarga, Mahan ganithagya Ramanujam, Birbal Ki Chathuraye.

UNIT- IV: General Grammar(Sanghya, Visheshan, ling, Vachan, Kriyavisheshan)

UNIT- V: Anuvad Abhyas–II

Books   Prescribed :
* Galpa Sanchayan   - D.B.H.P. Sabha Publishers, Chennai-17
* Naveen Hindi Patamala – I   - D.B.H.P. Sabha Publishers, Chennai-17
* Naveen Hindi Patamala – II   - D.B.H.P. Sabha Publishers, Chennai-17
* Sugam Hindi Vyakaran   - D.B.H.P. Sabha Publishers, Chennai-17
* Anuvad Abhyas – II   - D.B.H.P. Sabha Publishers, Chennai-17

[GRAMMAR & CIVILISATION
(ÉCHO A1 2e édition)]
(For candidates admitted 2013 onwards)

HRS/WEEK : 6   **CODE : U13FR1FRE01**
CREDIT : 3   **MARKS : 100**

Unit 1 Parcours d'initiation ; Vous comprenez

La différence entre le prénom et le nom, les nationalités, les nombres, les professions

La présentation, le genre et le nombre d'un nom, l'interrogation et la négation – l'identité, les lieux de la ville, les mots du savoir-vivre – saluer, remercier – l'espace francophone.

Unit 2 Au travail!

La conjugaison des verbes du 1er groupe, des accords, les articles – l'état civil, des personnes et des objets caractéristiques d'un pays – exprimer ses gouts – première approche de la société française.

Unit 3 On se détend!

La conjugaison des verbes irréguliers, le future proche, les pronoms après une préposition – les loisirs – proposer, accepter, refuser, demander une explication – première approche de l'espace de France, repérages de quelques lieux de loisirs

Unit 4 Racontez-moi ! ; Bon voyage !

Le passé composé, la date et l'heure – les moments de la journée, de l'année, les événements liés au temps – dire ce qu'on a fait – les rythmes de vie en France, des personnalités du monde francophone.

La comparaison, les adjectifs démonstratifs et possessifs – les voyages et les transports – négocier une activité, faire les recommandations – les transports en France

Unit 5 Bon appétit!

L'emploi des articles, la forme possessive – la nourriture, les repas, la fête – les situations pratiques à l'hôtel et au restaurant – les habitudes alimentaires en France.

TEXT BOOKS :

ECHO A1 – METHODE DE FRANÇAIS & CAHIER PERSONNEL D'APPRENTISSAGE
Authors: J. Girardet and J. Pécheur
Publication: CLÉ INTERNATIONAL, 2012.

HOLY CROSS COLLEGE (AUTONOMOUS) TIRUCHIRAPPALLI – 2.
I B.A., B.Sc., B.Com., B.R.Sc., B.C.A., B.B.A., SEMESTER I
PART II - ENGLISH 1 - GENERAL ENGLISH PAPER I

Hrs/Wk:6   Code:U10EL1GEN01
Credits: 3   Total: 100

OBJECTIVES

➢ To develop in the students LSRW Skills at the foundation basic level
➢ To focus on Oral Communication Skills through several Spoken English tasks given individually and in groups.
➢ To encourage students to read and appreciate biographies/passages/fables/folk talesTo develop sub skills including comprehension, vocabulary, grammar, spelling,punctuation and reference skills.

UNIT I: Speak Better I Tasks 1 – 30.

UNIT II:Speak Better II Generation of Alternatives Viewpoints Challenging Assumptions Redesigning Dominant Ideas and Crucial Factors.

UNIT III : Read and Communicate I : a) Fables and Folk Tales The Crow and the Kavun The Parakeet and the Clay Pot.

UNIT IV: Read and Communicate I: b) Fables and Folk Tales How the Ministers Laid Eggs How Andare Ate Curd at the Palace.

UNIT V: Read and Communicate II : Biographies MahatmaGandhi AbrahamLincoln

PRESCRIBED TEXT
OraneeJansz : EXPLORATIONS *A Course in reading, thinking and communication skills*: Foundation Books, Print.

LIST OF GENERAL TOPICS:
1.   Knowledge ispower
2.   The Impact of EnglishLanguage
3.   Science andTechnology
4.   Where there is a will there isway
5.   Honesty is the bestpolicy
6.   Birds of the same feather, flocktogether
7.   East or west home is thebest
8.   Make hay while the sunshines
9.   Your favouriteleader
10.   Description of a significant experience in yourlife.

B.C.A. : SEMESTER I
(For Candidates admitted from June 2014 Onwards)
MAJOR CORE 1: ADVANCED PROGRAMMING IN C
(Theory cum Lab)

Hours/Week: 7   Code: U14CA1MCT01
Credits: 6   Marks: 100

OBJECTIVE
➢ To develop programming skills using C language and to understand the concepts of C programming**.**

UNIT I
C FUNDAMENTALS: Computer Programming Concepts: Algorithms and Flow charts - Introduction to C Language – How to Run C Programs - Identifiers, Keywords, Constants, Variables and Data Types, Access Modifiers, Data Type Conversions- Operators- Conditional Controls – Loop Controls

UNIT II
ARRAYS: One Dimensional Arrays - Two Dimensional Array – Character Arrays and Strings. FUNCTION: Introduction - Elements of User Defined Function - Definition of Functions - Return Values and their Types - Function Calls- Function Declaration - Category of Function – Nesting of Function -Recursion - Passing Arrays to Function - Passing Strings to Function – The Scope, Visibility and Lifetime of Variables - Library functions.

UNIT III
STRUCTURES, UNIONS AND POINTERS: Defining Structure – Declaring Structure Variable - Accessing Structure Members - Structure Initialization - Array of Structure - Arrays within Structures - Structures within Structures -Structures and Function – Union**.**

UNIT IV
POINTERS: Pointers - Declaration of Pointers- Accessing Variables through Pointers - Chain of Pointers - Pointer Expressions - Pointer Increments - Pointers with Arrays, Strings - Array of Pointers - Pointers with Functions - Pointers with Structures**.**

UNIT V
FILE MANAGEMENT IN C: Defining and Opening a File - Closing a File - Input / Output Operations on Files - Error Handling During I/O Operations - Random Access to Files - Command Line Arguments - Dynamic MemoryAllocation**.**

TEXT BOOK(S)
1. E. Balagurusamy**, "Programming in C",** 4th Ed., Tata McGraw Hill, New Delhi, 2007.

BOOK(S) FOR REFERENCE
1.   Byron S. Gottfried**, "Programming with C",** 2nd Ed., Tata McGraw Hill, New Delhi,1998.
2.   Yashvant Kanetkar**, "Working with C",** BPB Publication, New Delhi,2001.

ADVANCED PROGRAMMING IN C LAB

1. SimplePrograms
2. ControlStructure
3. Arrays
4. Function
5. StringHandling
6. Structures
7. Pointers
8. Sequential FileAccess
9. Random FileAccess
10. Command Line Arguments

HOLY CROSS COLLEGE (AUTONOMOUS), TIRUCHIRAPALLI – 2
B.C.A. : SEMESTER I
(For Candidates admitted from June 2014 Onwards)
Allied 1: DIGITAL COMPUTER FUNDAMENTALS

Hours/Week:4   **Code:U14CA1ACT01**
Credits   :3   **Marks:100**

OBJECTIVE:
  ➢ To comprehend the different logic circuits and flip-flops.
  ➢ To get full-fledged knowledge on encoders, decoders, adders, counters.

UNIT I

NUMBER SYSTEMS: Decimal - Binary - Octal - Hexadecimal - Conversion from one number system to another - Codes: ASCII - Excess 3 - Gray – BCD Code - Binary Addition, Subtraction, Unsigned Binary numbers – Sign-Magnitude numbers – 2's Complement Representation - 2"s Complement arithmetic – Error Detecting codes – Error Correcting codes.

UNIT II

BASIC LOGIC GATES: Inverters - OR gates - AND gates - Boolean algebra - NOR gates, NAND gates – DeMorgan"s Theorem - Boolean Laws And Theorems.
K MAP: Sum of Products method - Truth Table to Karnaugh map - Pairs, Quads and Octects – Karnaugh map simplification methods - Don"t care conditions - Product of sums method.

UNIT III

COMBINATIONAL LOGIC CIRCUITS: Multiplexers - Demultiplexers - Decoders - Encoders - Arithmetic Building Blocks - Half and Full adder – Half subtractor – Full subtractor - Adder-Subtractor.

UNIT IV

FLIP-FLOPS: SR Flip Flop, D Flip Flop, JK Flip Flop, T Flip Flop, Edge-Triggered Flip Flop, Master Slave Flip Flop.
SEQUENTIAL CIRCUITS: Flip Flop Input Equations - State Table - State Diagram - Design Example - Design Procedure.

UNIT V

REGISTERS, COUNTERS: Types of registers - Serial in Serial Out – Serial in Parallel out – Parallel In Serial Out – Parallel In parallel Out.
COUNTERS: Asynchronous or Ripple Counter – Ring counter – Synchronous Counter.

TEXT BOOKS

1. Albert Paul Malvino, Leach Donald. P, **Digital Principles and Applications**, 2002, Tata McGraw Hill Publishing CompanyLtd, NewDelhi.

   UNIT   I   Chapters 5 (5.1 - 5.8), 6(6.1-6.6)
   UNIT   II   Chapters 2 (2.1-2.6), 3(3.1-3.8)
   UNIT   III Chapters 4 (4.1 - 4.7), 6 (6.7,6.8)

2. Morris Mano, **Computer System Architecture**, 2005,Prentice Hall of India Private Ltd, NewDelhi.

   UNIT   IV Chapter 1 (1.6,1.7)
   UNIT   V Chapter 12 (12.1 - 12.6)

REFERENCE BOOKS

1. Albert Paul Malvino and Brown Jerald. Digital **Computer Electronics**, 2000, Tata McGraw-Hill PublishingCompany Ltd, NewDelhi.
2. Anokh Singh, Chabra . A.K,   **Fundamentals of   digitalelectronics   and Microprocessors**, 2003, S.Chand and Company Ltd, New Delhi.
3. Bartee Thomas.C, Digital **Computer Fundamentals**, 2006, Tata McGraw-Hill, Publishing Company Ltd, NewDelhi.
4. Morris Mano .M, **Digital Logic and Computer Design**, 2006,Prentice HallofIndia Private Ltd, NewDelhi.
5. Wakerly John. F, **Digital Design Principles and Practices**, 2006, Prentice Hall of IndiaPrivateLtd, New Delhi

HOLY CROSS COLLEGE (AUTONOMOUS) TIRUCHIRAPPALLI – 620 002.
(For the candidates admitted from 2008 onwards)
SEMESTER – I
Allied 2 - APPLIED MATHEMATICS I
(for computer science students)

Total Hours: 60
Hours/Week: 4   **Code:U08MA1ACT05**
Marks:100   **Credits: 3**

GENERAL OBJECTIVE:
To impart the knowledge on matrices, differential equation of I and II order, Laplace Transforms and Fourier series.

UNITI:MATRICES   **12 Hrs**
Solution of system of linear equations-- Eigen values and Eigen vectors of a matrix – Cayley Hamilton's Theorem(without proof).

UNIT II :PARTIALDIFFERENTIALEQUATIONS   **12 Hrs**
Formation of equations by eliminating arbitrary constants and arbitrary functions; definition of general, Particular, complete and singular integrals – solutions of first order equations in their standard forms – $F(p,q)$
$= 0$, $F(x,p,q) = 0$, $F(y,p,q) = 0$, $F(z,p,q) = 0$,
$F(x,p) = F(y,q)$, $Z = px+qy+f(p,q)$, Lagrange's equations $Pp+Qq = R$

UNIT III :LAPLACETRANSFORMS   **12 Hrs**
Definition - Laplace transforms of functions e^{at}, Cosat, Sinat, t^n (n is a +ve integer), $e^{at}cosbt$, $e^{at}sinbt$, $f(t)$, $f'(t)$, $f''(t)$, $t^n f(t)$, $f(t)/t$

UNIT IV : INVERSELAPLACETRANSFORMS   **12 Hrs**
Definition - Inverse transforms relating to the above standard functions

UNIT V:FOURIERSERIES   **12 Hrs**
Fourier Series: Fourier Series: – Even and odd functions – properties of odd and even functions – Half range Fourier series – Development in sine and cosine series (omitting general interval).

TEXT BOOKS:
1. Narayanan S, Hanumantharao.R, ManicavachagomPillay.T.K, Kandaswamy(2000), <u>ANCILLARY MATHEMATICS – VOLUME 1 - PART I –ALGEBRA,</u>S.Viswanathan Printers and publishers Pvt Ltd,Chennai.
2. Narayanan.S and ManicavachagomPillay T.K(2000), <u>INTEGRAL CALCULUS AND DIFFERENTIALEQUATIONS.</u>S.ViswanathanPrintersandpublishersPvtLtd,Chennai.
3. Venkataraman M.K, <u>ENGINEERING MATHEMATICS (VOL II),</u> (2006) National publishingcompany Chennai
Unit : I
1. "Ancillary Mathematics – Volume 1 - Part I –Algebra",
S. Narayanan, R. Hanumantharao, T.K. ManicavachagomPillay& Kandaswamy.
Unit II, III & IV:
2. NarayananandManickavasagamPillai,"AncillaryMathematicsVolume1: Part II (Section B)-Integral Calculus and Differentialequations.
Unit V:
3. Dr. M.K. Venkataraman, "Engineering Mathematics (Vol II)", Third Edition,1998.

REFERENCE BOOKS:

1.   Ashan and zafar (2006) ,<u>DIFFERENTIAL EQUATION AND THEIR APPLICATIONS</u> , Prentice Hallof India,Pvt Ltd.

2.   Iyengar(2000), <u>DIFFERENTIAL EQUATION</u> Anmal Publications, Newdelhi.

3.   ManicavachagomPillayT.K(2006),Algebra , S.Viswanathan Printers and publishers Pvt Ltd,Chennai.

ENVIRONMENTAL STUDIES

Hrs /Week: 2	**Code: 14RE1EST01**
CREDITS: 2	**Marks: 100**

Unit I–Awareness and Natural Resources

Awareness of Environmental issues and management strategies–need of the hour Renewable and non-renewable resources-uses, present status and management of forest, water, land and energy resources.

Unit II–Ecosystems and Biodiversity

Ecosystem–concepts, structure and types–concept of food chain sand food web–causes and effects of weakening food chains

Biodiversity–concept of genetic, species and ecological biodiversity–ecological and economic values–India, a mega diversity country, hotspots–threats to biodiversity and conservation measures.

Unit III–Environmental Pollution

Causes, effects and control of water, and air pollution–global warming–ozone depletion– Nuclear hazards.

Unit IV–Human population and Environment

Population growth at national and global level.

World food production-Effects of modern agriculture on land and Eco systems-GMOs and related issues.

Environmental pollutions and diseases-malaria- chikungunya

Unit V–Environment and Social Issues

Rich poor wide–at national and global levels. Urbanization –slums Changing value systems –AIDS Family welfare programs

HOLY CROSS COLLEGE (AUTONOMOUS), TIRUCHIRAPPALLI-2
B.A. /B.Sc. / B.Com. / B.R.Sc. / B.C.A. DEGREE
COURSE LIFE ORIENTED EDUCATION
ETHICS – I: RELIGION AND VALUE SYSTEMS

Hrs /Wk: 1   **Code:**
U12VE2LVE01
Credits : 1   **Marks : 100**
OBJECTIVES:

- To Understand My and Other Religions andCulture
- To Appreciate My and Other Religions andCulture
- To Learn from other Religions andCulture
- To Interact with My and Other Religions and Culture to enhance My faith in My religion.
- To Help the students to become aware of the negative forces of religions.
-

UNIT – I: RELIGION

Concept of God- Faith, Meaning, Definition, Nature, Characteristics. Basic values of different religions-Globalization.

UNIT – II: DIFFERENT RELIGIONS

Basic characteristics and basic thoughts- Buddhism, Christianity, Hinduism, Islam, Jainism and Sikhism

UNIT – III: UNITY OF RELIGION

Unity of Vision and Purpose- Respect for Other's Faith, Inter Religious Co-operation, Religious Pluralism as a fact and Religious Pluralism as a value.

UNIT – IV: FUNDAMENTALISM, COMMUNALISM AND SECULARISM

Meaning and impact of Fundamentalism-Communalism-Violence and terrorism – Tolerance – Secularism - Individualism.

UNIT – V: VALUE SYSTEMS

Value and Value Systems - Moral Values -Individuals and the need to stand for values in the concept of Globalization - Consumerism. Will power to live up to your values. Healthy body for empowerment – Physical health and Mental hygiene, food and exercises.

REFERENCES:
1. Social Analysis (a course for all first year UG students), 2001. Department ofFoundation Courses, Loyola College,Chennai-34.
2. Special topics on Hindu Religion, 2001.Department of Foundation Courses,Loyola College,Chennai-34.
3. Religion: the living faiths of the world, 2001. Department of Foundation Courses,Loyola College,Chennai-34.
4. Sydney Am Meritt, 1997. Guided meditations foryouth.
5. Marie Migon Mascarenhas,1986. Family life education- Value Education, A text book for Collegestudents.

HOLY CROSS COLLEGE(AUTONOMOUS) TRICHIRAPALLI-2.
B.A/ B.Sc/ B.Com/ B.R.Sc./ B.C.A – DEGREE COURSES LIFE ORIENTED
EDUCATION BIBLE STUDIES – I: NEW TESTAMENT

Hrs / Wk : 1   **Code: U12VE2LVBO1**
Credit : 1   **Marks : 100**

OBJECTIVE:

- Developing the passion for the Word of God – Jesus and inculcating the thirst of Missionaries being a disciple ofChrist.

UNIT - I: BIBLE – THE WORD OF GOD

- Books of the Bible – Division into Old Testament and New Testament – history of theBible-

- Messianie Prophecier (Isaiah 9:6,40:3,53:1-12,61:1-3,Micah5:2)

- The Birth and Ministry of John the Baptist (Luke 1:1-80,Mat3:1-17,14:1-12)

- The Birth, Passion and Resurrection of Jesus (Luke 1:26-80,2:1-52,John 1:18-21)

UNIT – II: MINISTRY OF JESUS

- Miracles (Mark 2:1-12,Luke 4:38-41,6:6-11,7:1-17,8:26-56,John2:1-12)

- Parables (Luke6:46-49,8:4-15,10:25-37,15:1-32)

- Preaching

  ➢ Sermon on the mount (Mat 5-7)

  ➢ Lord's Prayer (Luke 11: 1-13)

  ➢ Kingdom of God (Mat 13:24-50)

- Prayer life of Jesus (Luke 5:12-16,John 11:41-45,17:1-26,Mark14:32-42)

- Rich and Poor (Luke 16:19-31,21:1-4)

- Women Liberation (John4:1-30,8:1-4)

- Women in the NewTestament

- Mary(Mother of Jesus)-(Luke 1:27-35, John 2:1-12, 19:35, Acts1:13-14)

- Martha & Maria (Luke 10: 38- 42, John 11:1-46)

UNIT – III: CHURCH – BIRTH AND GROWTH

- EarlyChurch

- Birth (Acts 2:1-41)

- Unity and sharing (Acts2:42-47,4:1-37,5:1-11)

- Witnessing life (Acts 3:1-26,5:12-42,8:26-40,16:20-34)

- Comparison between early Church and presentChurch.

UNIT – IV: DISCIPLES AND APOSTLES

- Betrayal and the change in the life of St. Peter (Luke 22:1-7,Acts2:1-41,12:1-17)

- St.Andrew (Mat 4:18-20,John1:35-42,6:1-14)

- St.Stephen (Acts 6,7)

- St.Paul (Acts 8,9,14,17,26 and 28)

UNIT – V: MISSIONARIES

- St. Thomas (John 20:24-31) & Missionary to India\ Pandithar RamaBai

- WilliamCarrie

- Dr.Ida Scuddar & St. Britto(Oriyur)

- AmyCarcheal

- Mother Teresa(Calcutta)

- Devasagayam (Nagercoil)

- Staines &Family

REFERENCES:

1. John Stott, 1994, **"Men with a Message"**, Angus Hudson Ltd. London.

HOLY CROSS COLLEGE (AUTONOMOUS) TIRUCHIRAPPALLI -2
B.A/B.Sc./B.Com/B.R.Sc/B.C.A-DEGEE COURSES
LIFE ORIENTED EDUCATION CATECHISM – I: GOD OF LIFE

Hrs /Wk : 1   Code   : U12VE2LVC01
Marks   : 100   Credit : 1

OBJECTIVES:

- To enable the students to know God and his Salvific acts through HolyBible
- To enable the students to know about the Paschal Mystery

UNIT - I: CREATION AND COVENANT

Genesis - God revealed himself in creation -God who preserves creation through covenants (Pentateuch) -Our response to God's covenant -Reason for its success and failure -The relationship of God with Israel -Image of God in Old Testament-God and me

UNIT - II: GOD OF THE PROPHETS

God's care for the humanity through Prophets-Major (Isaiah, Jeremiah) Minor (Amos) and Women (Deborah) Prophets-Their life and mission. Theology of Prophets -Concept of sin and collective sins expressed by prophets and God's savinglove.

UNIT - III: GOD OF WISDOM

God experience through wisdom Literature, its origin and growth

UNIT - IV: SYNOPTIC GOSPELS

Synoptic Gospels and John's Gospel – Author –historical background –Chief message of each Gospel and for whom it was written. A few passages for the study of parallelism in the synoptic gospels.

UNIT - V: LUKE'S GOSPEL

Study of Luke's Gospel in detail – specialty of the gospel – main emphasis of the message – meaning and blessing of suffering and paschal joy in one's life.

Passion – Paschal mystery

REFERENCES:

1. Catechism of the Catholic Church published by Theological Publications in India for the Catholic Hierarchy of India,1994.

2. The Holy Bible Revised Standard Version with Old and New Testaments Catholic Edition forIndia.

3. Vaalvin Valizha – St. John's Gospel – Fr.Eronimus

Hrs /Wk: 5   **Code : U12TL2TAM02**

Credits : 3   **Marks: 100**

நோக்கங்கள்:

1. இறைச் சிந்தனை வழி மாணவர்களை ஒருமுகப்படுத்துதல்.

2. தமிழ்ச் சான்றோர்களின் சிறப்புகளை அறிமுகப்படுத்துதல்.

3. மாணவர்களின் நல்லெண்ணங்களை மேம்படுத்துதல்.

4. நட்புணர்வை மாணவர்கள் மனதில் பதியவைத்தல்.

பயன்கள்:

1. இப்பாடம் மாணவர்களிடையே ஆன்மீக அறிவு அறிமுகமாகவும், வளரவும், ஆழப்படவும் துணைபுரிகின்றது. இது ஓர் இயற்கைப் பூங்கா.

2. தமிழை நேசித்து, தமிழ்ச் சான்றோர்களின் மீது மதிப்புக் கொள்ளவும், தானும் சான்றோர் ஆகவும் இது ஒரு பாலமாக பயன்படுகிறது.

3. ஊற்றுக்களாய் மாணவிகளிடையே மறைந்து கிடக்கும் நல்லெண்ணங்களை வெளிக்கொணரவும் நேர்மறைச் சிந்தனைகள் தோன்றவும் பயன்படுவதால் இது ஒரு நூலகமாகும்.

4. வாழ்க்கையில் நட்பின் தேவையை உணர வைக்கும் வழிகாட்டியாகத் திகழ்கிறது. இது வாழ்க்கைப் பெட்டகம்.

அலகு:1	செய்யுள்
	இறைமை
	அன்பு
	நேர்மை
அலகு:2	செய்யுள்
	தன்னம்பிக்கை
	முயற்சி
அலகு:3	
	தமிழ் இலக்கிய வரலாறு - தமிழாய்வுத்துறை வெளியீடு

பல்லவர்காலம்

நாயக்கர்காலம்

அலகு:4

படைப்பிலக்கியம் - புதினம்

சு.தமிழ்ச்செல்வி - கீதாரி

அலகு:5

கடிதம் எழுதுதல்

பாட நூல்கள்

செய்யுள்	- தமிழாய்வுத்துறை வெளியீடு
தமிழ் இலக்கிய வரலாறு	- தமிழாய்வுத்துறை வெளியீடு
கீதாரி	- சு.தமிழ்ச்செல்வி
கடித இலக்கியம்	- பயிற்சி ஏடு.

HOLY CROSS COLLEGE (AUTONOMOUS) TIRUCHIRAPPALLI-620002
DEPARTMENT OF HINDI
PART – I LANGUAGE HINDI FOR B.A, B.Sc & B.Com
HINDI PAPER-II PROSE, DRAMA, GRAMMAR-II, COMPREHENSION
SEMESTER –II

Hrs/Wk : 5   **Code: U14HN2HIN02**
Credits : 3   **Marks : 100**

UNIT – I **:** Bharat matha, Premchand, Taj mahal ki Aathma Kahani, Mahakavi Prasadh,
Meritheertha yatra

UNIT- II **:** Sathyameva jayathe - Drama (Chapter 1 & 2)

UNIT- III : Sathyameva jayathe–Drama (chapter 3)

UNIT- IV : General Grammar (Sarvanaam, Kriya, Kaal, Karak, Ne Ka niyam)

UNIT- V **:** Comprehension–Prose passages

Books   Prescribed :
- Naveen Gadhya Chayanika   –   D.B.H.P. Sabha Publishers, Chennai-17
- Sathyameva Jayathe   –   D.B.H.P. Sabha Publishers, Chennai-17
- General Grammar   –   D.B.H.P. Sabha Publishers, Chennai-17

HOLY CROSS COLLEGE (AUTONOMOUS), TIRUCHIRAPPALLI – 2

DEPARTMENT OF FRENCH

SYLLABUS

SEMESTER II
PART I - LANGUAGE - FRENCH PAPER II [GRAMMAR, CIVILISATION & TRANSLATION (ÉCHO A1 2e édition)]
(For candidates admitted 2013 onwards)

HRS/WEEK : 5   CODE : U13FR2FRE02
CREDIT : 3   MARKS : 100

Unit 1 Quelle journée !

La conjugaison pronominale, l'impératif, l'expression de la quantité – les activités quotidiennes, les achats et l'argent – demander des nouvelles de quelqu'un – le comportement en matière d'achat et d'argent.

Unit 2 Qu'on est bien ici !

Les prépositions et les adverbes, les verbes exprimant un déplacement – le logement, la localisation, l'orientation, l'état physique, le temps qu'il fait – demander de l'aide, exprimer une interdiction – le climat en France, les cadres de vie (ville et campagne)

Unit 3 Souvenez-vous ?

Emplois du passé composé et de l'imparfait – les moments de la vie, la famille, les relations amicales, amoureuses, familiales – demander/donner des informations sur la biographie d'une personne – le couple et la famille.

Unit 4 On s'appelle ?

Les pronoms compléments directs et indirects – les moyens de la communication – aborder quelqu'un, exprimer une opinion sur la vérité d'un fait – les conseils de savoir-vivre en France.

Unit 5 Un bon conseil ! ; Parlez-moi de vous !

L'expression de déroulement de l'action, les phrases rapportées – le corps, la santé et la maladie – téléphoner, prendre rendez-vous, exposer un problème – les conseils pour faire face aux situations d'urgence.

La place de l'adjectif, la proposition relative, la formation des mots – la description physique et psychologique des personnes, les vêtements et les couleurs – demander/donner une explication – quelques styles comportementaux et vestimentaires en France.

TEXT BOOKS :

ECHO A1 – METHODE DE FRANÇAIS & CAHIER PERSONNEL D'APPRENTISSAGE
Authors: J. Girardet and J. Pécheur
Publication: CLÉ INTERNATIONAL, 2012.

NO.OF HRS/WK:6   **CODE:U10EL2GEN02**
NO.OF CREDITS: 3   **Marks: 100**

OBJECTIVES

Integrated skills of English with focus on reading, writing, speaking and listening. Integrated sub skills that include comprehension, vocabulary, grammar, spelling, punctuation and reference skills.

Literary appreciation (incidental)

UNIT I

The Suitor and Papa: *Anton Chekov*

UNIT II

The Sniper :*Liam O'Flaherty*

UNIT III

A Handful of Dates :*Tayeb Salih*

UNIT IV

Two Gentlemen of Verona: *A.J. Cronin*

UNIT V

GRAMMAR - 1. Transformation of sentences – a) Direct – Indirect speech b) Voices

2. Question Tag

3. Tenses COMPREHENSION – Prescribedtexts

COMPOSITION - 1. Personal letter

2. CreativeWriting

3. NarrativeWriting

4. ArticleWriting

GENERAL ESSAY: 5 TOPICS

1.   My relationship with mymother
2.   My favouritehobby
3.   Look before youleap
4.   All that glitters is notgold
5.   Me, after tenyears…

BOOKS FOR REFERENCE

Renu, Anand and Geetha, Rajeevan, *Images Of Life An Anthology of Prose,* New Delhi: Cambridge University Press, 2006. Print.

HOLY CROSS COLLEGE (AUTONOMOUS), TIRUCHIRAPALLI – 2
B.C.A. : SEMESTER II
(For Candidates admitted from June 2014 Onwards)
MAJOR CORE 2: DATA STRUCTURES AND ALGORITHMS

Hours/Week:5   **Code:U14CA2MCT02**
Credits   :5   **Marks:100**

OBJECTIVE : To understand the fundamental concepts of Data Structures and learn to develop Algorithms.

UNIT I
INTRODUCTION TO DATA STRUCTURE: Arrays -Arrays as abstract data type - Arrays row major and column major Sequences. **STACK:** Definition and Example - Representing Stack: Implementing the Pop operation – Testing for exceptional conditions – Implementing the Push operation. Applications: Infix, Postfix and Prefix; Basic Definitions and Examples – evaluating a Postfix Expression - Converting an Expression from infix to postfix. **RECURSION:** Recursive definition and processes: Factorial function – Multiplication of Natural Numbers – Fibonacci sequence
– Binary Search – Properties of Recursive Definitions orAlgorithms.

UNIT II
QUEUES: The Queue and its Sequential representation: The Queue as an Abstract Data Type – Insert Operation – Priority Queue – Array implementation of a Priority Queue. **LINKED LISTS:** Inserting and Removing Nodes from a List – Linked implementation of Stacks – getnode and freenode operations
– Linked implementation of Queues – Linked list as a Data Strucutre – List implementation of Priority Queues – Headernodes.

UNIT III
BINARY TREES: Operations on Binary trees – Applications of Binary Trees. Binary Tree Representations: Node representation of Binary Trees – Internal and External Nodes – Implicit Array representation of Binary Trees. Applications: Tree Traversals – General Expression as Trees – Evaluating an Expression tree – Constructing a Tree.

UNIT IV
SORTING: Bubble Sort – Quick Sort – Heap Sort; Insertion Sort: Simple Insertion – Shell Sort.

UNIT V
GRAPHS: Transitive Closure - Warshall"s Algorithm – Shortest Path Algorithm – Dijkstra"s AlgorithmRevisited**.**

TEXT BOOK :

1. YedidyahLangsam,MosheJ.Augenstein,AaronM.Tenenbaum,"**DataStructuresUsingC and C++**", 2006,SecondEdition.

UNIT I: Chapters1.1(Pg.no29-34), 1.2(Pg.no42-55), 2.1-2.3(Pg.no93-122), 3.1(Pg.no133-141).
UNIT II : Chapters 4.1- 4.2(Pg.no190-218).
UNIT III : Chapters 5.1-5.2(Pg.no265-284),5.5(325-334).
UNIT IV : Chapters 6.2(Pg.no355-361), 6.3(Pg.no372-378), 6.4(Pg.no381 - 384)
UNIT V : Chapters 8.1(Pg.no531-532,537-544), 8.3(Pg.no563-564).

REFERENCE BOOKS:

1. Ellis Horowitz, Sartaj Sahni, Dinesh Mehta. " **Fundamentals of Data Structures in C++**", 2009,SecondEdition.

2. Yedidyah Langsam, Moshe J.Augenstein, Aaron M.Tenenbaum, "**Data Structures Using C**", 2005.

3. D.Samanta, "**Classic Data Structures**",2005.

4. Robert.L.Kruse, " **Data structures and program design**", Third Edition ,2001.

5. A.Michael Berman, "**Data structures via C++ Object by Evolution**", 2002.

Hours/Week:5   **Code:U14CA2MCP03**
Credits   :4   **Marks:100**

Write Object Oriented Programs to implement the following:

1. Operations on Stack and Conversion ofexpressions

2. Operations onQueue

3. Operations on LinkedList

4. Operations on Binary tree andTraversals

5. SORTING:

        a. Bubble Sort

        b. InsertionSort

        c. SelectionSort

        d. HeapSort

        e. QuickSort

6. SEARCHING:

        a. LinearSearch

        b. BinarySearch

7. Dijkstra‟s Algorithm to find the ShortestPath

HOLY CROSS COLLEGE (AUTONOMOUS) TIRUCHIRAPPALLI – 620 002.
(For the candidates admitted from 2008 onwards)
SEMESTER – II
Allied 3 - APPLIED MATHEMATICS II
(for Computer science students)

Total Hours: 60
Hours/Week: 4   **Code:U08MA2ACT11**
Credits: 3   **Marks:100**
GENERAL OBJECTIVE:
      This course introduces the basic concepts of mathematics relevant to business and
      managerial skills.

UNIT I:TRANSPORTATION PROBLEM
Transportation problem - Initial basic feasible solution – North west corner rule – Vogel's
Approximation method – Matrix minima method(optimal solution excluded)

UNIT II: **ASSIGNMENT PROBLEM**
Assignment problem(Travelling salesman problem excluded)

UNIT III:
MEASURES OF CENTRAL TENDENCY, VARIATION AND SKEWNESS
Mean – Median – Mode – Measures of variation: Range – Quartile deviation &Standard
deviation – Karl Pearson's Coefficient of Skewness.

UNIT IV: **ASSOCIATION OF ATTRIBUTES:**
Yules coefficient of association.Correlation coefficient – rank correlation.

UNIT V: **TESTS OF SIGNIFICANCE**
Test of significance based on normal distribution – Difference between proportions –
Difference between means – Difference between standard deviation(problems only)

TEXT BOOKS:
   1. KandiSwarup , Gupta P.K., Man Mohan (2004), "**OPERATIONS RESEARCH**",
      Sultan Chand & Sons, NewDelhi.
   2. Vittal. P.R.,(2004), "**BUSINES STATISTICS**",Margham Publishers,Chennai.
   3. Pillai R.S.N, Bagavathi.V (2007) "**STATISTICS**"(Theory and Practice), S.Chand
      andcompany, New Delhi.

REFERENCE BOOKS:
   1. J.N.Kapur&H.C..Saxena(2003), "**MATHEMATICALSTATISTICS**",
   2. Shukla M.C(2000), "**STATISTICS**", S.Chand and S.Chand and Company,
      NewDelhi.company, New Delhi.
   3. Vittal .P.R.,(2004), "**BUSINESS STATISTICS**", Margham publishers, Chenna

B.A/B.Sc./B.Com/B.R.SC/B.C.A/B.B.A DEGREEEXAMINATION
SEMESTER-II
SBE-1 SOFT SKILL DEVELOPMENT

Hrs– 2/Week   **CODE:U14RE2SBT01**
                                                       CREDITS : 2

General Objective:

The student understands the need for the development of self esteem, team spirit and communicative skills to prepare themselves for employability.

UNIT I: Capacity Building

Self awareness-building self esteem-importance of having a strong self–esteem–developing positive attitude -.Anchoring on principles: Universal principles and values–forming & inculcating values-Leadership skills.

UNIT II : Interpersonal skills

Trust-trustworthiness-interpersonal communication–art of listening, reading and writing–art of writing–Emails etiquettes-building relationship-networking

UNIT III: Corporate skills

Vision, mission and goals: Concepts, vision setting, goal setting, goals for roles Individual and Group goals, Concept of synergy, team building, group skills

UNIT IV: Management skills

Developing Body Language–Practicing etiquette and mannerism–Stress Management– Time Management-Importance and urgent activities-Time management to move towards life vision.

UNIT V: Employability skills

Writing Resume/CV- interview skills-Group Discussion-mock Interview-mock GD-Career planning

TEXT BOOKS:

Meena K.Ayothi V.(2013) A Book on development of soft skills(soft skills: A Road Map to Success) P.R . Publishers and distributors, Trichy.

Alex K.(2012) Soft Skills Know Yourself & Know the World, S.Chand&Company Ltd., NewDelhi

Book Recommended:

1.Francis Thamburaj S.J.(2009).Communication soft skills for Professional Excellence,1st Ed., GracePublishers,

Rathan Reddy B.(2005).Team Development and Leadership, Jaico Publishing House, Mumbai

HOLY CROSS COLLEGE (AUTONOMOUS), TIRUCHIRAPPALLI–2B.A./B.Sc.,/B.Com./BCA&BBA, DEGREE EXAMINATION
SEMESTER II
SKILL BASED ELECTIVE II: RURAL ENRICHMENT AND SUSTAINABLE DEVELOPMENT

Hrs–2/Week   **CODE:U08RE2SBT02**
                                                      CREDIT: 2

UNIT I:
Green Revolution and industrialization
Cost climate changes and mismanagement of natural resources: Effects of over exploitation of land and water, mono culture practices use of hybrid and genetically modified (GM) seeds dumping of chemical fertilizers and pesticides-reduced economic returns from agriculture- resultant social issues-poverty-farmers suicide.

UNIT II:
Sustainable Development: concept environmental, social and economic aspects of sustainable development-sustainable development as solution to address rural issues-successful case studies from India .

UNIT III:
Elements in sustainable development I: Water shed management-rain water Harvesting, de- silting, bunds construction ,check dams, managing rain water drainage canals Alternative agricultural models –agro-forestry.

UNIT IV:
Elements in sustainable development II: addressing agricultural issues-biofertilizers-azolla culture, vermin composting, biopesticides-panchakavya, mulikai puchiviratti , amirthakarasal, addressing health and sanitation issues-health, nutrition, vaccination.

UNIT V:
Survey of natural resources and resource mapping in villages, village level participatory approach (VLPA)-role of SHGs and NGOs. Introductionto disaster Management (fire and flood)

HOLY CROSS COLLEGE (AUTONOMOUS), TIRUCHIRAPPALLI-2
B.A. /B.Sc. / B.Com. / B.R.Sc. / B.C.A. DEGREE
COURSE LIFE ORIENTED EDUCATION
ETHICS – I: RELIGION AND VALUE SYSTEMS

HRS /Wk:1

CODE: U12VE2LVE01
CREDITS : 1
MARKS : 100

OBJECTIVES:

- To Understand My and Other Religions andCulture
- To Appreciate My and Other Religions andCulture
- To Learn from other Religions andCulture
- To Interact with My and Other Religions and Culture to enhance My faith in My religion.
- To Help the students to become aware of the negative forces ofreligions.

UNIT – I:RELIGION

Concept of God- Faith, Meaning, Definition, Nature, Characteristics. Basic values of different religions-Globalization.

UNIT – II: DIFFERENT RELIGIONS

Basic characteristics and basic thoughts- Buddhism, Christianity, Hinduism, Islam, Jainism and Sikhism

UNIT – III: UNITY OF RELIGION

Unity of Vision and Purpose- Respect for Other's Faith, Inter Religious Co-operation, Religious Pluralism as a fact and Religious Pluralism as a value.

UNIT – IV: FUNDAMENTALISM, COMMUNALISM AND SECULARISM

Meaning and impact of Fundamentalism-Communalism-Violence and terrorism – Tolerance – Secularism - Individualism.

UNIT – V: VALUE SYSTEMS

Value and Value Systems - Moral Values -Individuals and the need to stand for values in the concept of Globalization - Consumerism. Will power to live up to your values. Healthy body for empowerment – Physical health and Mental hygiene, food and exercises.

REFERENCES:
1. Social Analysis (a course for all first year UG students), 2001. Department ofFoundation Courses, Loyola College,Chennai-34.
2. Special topics on Hindu Religion, 2001.Department of Foundation Courses,Loyola College,Chennai-34.
3. Religion: the living faiths of the world, 2001. Department of Foundation Courses,Loyola College,Chennai-34.
4. Sydney Am Meritt, 1997. Guided meditations foryouth.
5. Marie Migon Mascarenhas,1986. Family life education- Value Education, A text book for Collegestudents.

HOLY CROSS COLLEGE(AUTONOMOUS) TRICHIRAPALLI-2.
B.A/ B.Sc/ B.Com/ B.R.Sc./ B.C.A –
DEGREE COURSES LIFE ORIENTED
EDUCATION BIBLE STUDIES – I: NEW
TESTAMENT

HRS / WK: 1   **CODE:U12VE2LVB01**
MARKS : 100   **CREDIT : 1**

OBJECTIVE:

- Developing the passion for the Word of God – Jesus and inculcating the thirst of Missionaries being a disciple ofChrist.

UNIT - I: BIBLE – THE WORD OF GOD

- Books of the Bible – Division into Old Testament and New Testament – history of the Bible -

- Messianie Prophecier (Isaiah 9:6,40:3,53:1-12,61:1-3,Micah5:2)

- The Birth and Ministry of John the Baptist (Luke 1:1-80,Mat3:1-17,14:1-12)

- The Birth, Passion and Resurrection of Jesus (Luke 1:26-80,2:1-52,John 1:18-21)

UNIT – II: MINISTRY OF JESUS

- Miracles (Mark 2:1-12,Luke 4:38-41,6:6-11,7:1-17,8:26-56,John2:1-12)

- Parables (Luke6:46-49,8:4-15,10:25-37,15:1-32)

- Preaching

  - Sermon on the mount (Mat 5-7)

  - Lord's Prayer (Luke 11: 1-13)

  - Kingdom of God (Mat 13:24-50)

- Prayer life of Jesus (Luke 5:12-16,John 11:41-45,17:1-26,Mark14:32-42)

- Rich and Poor (Luke 16:19-31,21:1-4)

- Women Liberation (John4:1-30,8:1-4)

- Women in the NewTestament

- Mary(Mother of Jesus)-(Luke 1:27-35, John 2:1-12, 19:35, Acts1:13-14)

- Martha & Maria (Luke 10: 38- 42, John 11:1-46)

UNIT – III: CHURCH – BIRTH AND GROWTH

- EarlyChurch

- Birth (Acts 2:1-41)

- Unity and sharing (Acts2:42-47,4:1-37,5:1-11)

- Witnessing life (Acts 3:1-26,5:12-42,8:26-40,16:20-34)

- Comparison between early Church and presentChurch.

UNIT – IV: DISCIPLES AND APOSTLES

- Betrayal and the change in the life of St. Peter (Luke 22:1-7,Acts2:1-41,12:1-17)
- St.Andrew (Mat 4:18-20,John1:35-42,6:1-14)
- St.Stephen (Acts 6,7)
- St.Paul (Acts 8,9,14,17,26 and 28)

UNIT – V: MISSIONARIES

- St. Thomas (John 20:24-31) & Missionary to India\ Pandithar RamaBai
- WilliamCarrie
- Dr.Ida Scuddar & St. Britto(Oriyur)
- AmyCarcheal
- Mother Teresa(Calcutta)
- Devasagayam (Nagercoil)
- Staines &Family

REFERENCES:

1. John Stott, 1994, **"Men with a Message"**, Angus Hudson Ltd. London.

HOLY CROSS COLLEGE (AUTONOMOUS) TIRUCHIRAPPALLI -2
B.A/B.Sc./B.Com/B.R.Sc/B.C.A-DEGEE COURSES
LIFE ORIENTED EDUCATION CATECHISM – I: GOD OF LIFE

HRS /WK:1   **CODE: U12VE2LVC01**
MARKS: 100   **CREDIT :1**

OBJECTIVES:

- To enable the students to know God and his Salvific acts through HolyBible

- To enable the students to know about the Paschal Mystery

UNIT - I: CREATION AND COVENANT

Genesis - God revealed himself in creation -God who preserves creation through covenants (Pentateuch) -Our response to God's covenant -Reason for its success and failure -The relationship of God with Israel -Image of God in Old Testament-God and me

UNIT - II: GOD OF THE PROPHETS

God's care for the humanity through Prophets-Major (Isaiah, Jeremiah) Minor (Amos) and Women (Deborah) Prophets-Their life and mission. Theology of Prophets -Concept of sin and collective sins expressed by prophets and God's savinglove.

UNIT - III: GOD OF WISDOM

God experience through wisdom Literature, its origin and growth

UNIT - IV: SYNOPTIC GOSPELS

Synoptic Gospels and John's Gospel – Author –historical background –Chief message of each Gospel and for whom it was written. A few passages for the study of parallelism in the synoptic gospels.

UNIT - V: LUKE'S GOSPEL

Study of Luke's Gospel in detail – specialty of the gospel – main emphasis of the message – meaning and blessing of suffering and paschal joy in one's life.

Passion – Paschal mystery

REFERENCES:

1. Catechism of the Catholic Church published by Theological Publications in India for the Catholic Hierarchy of India,1994

2. The Holy Bible Revised Standard Version with Old and New Testaments Catholic Edition forIndia.

3. Vaalvin Valizha – St. John's Gospel – Fr.Eronimus

இளம் வணிகவியல் / இளங்கலை / இளம் அறிவியல் பட்ட வகுப்பு
இரண்டாம் ஆண்டு - மூன்றாம் பருவம் - 2014
தாள் - III

Total Hours : 90
Code   : U12TL3TAM03   **Marks : 100**
Hrs   : 6Hrs /Wk
Credit   : 3

நோக்கங்கள்:

1. வாழ்வின் கூறுகளாகியஅறம், பொருள், இன்பம், வீடுபேறு ஆகியவற்றின்
   வழிமுறைகளை எடுத்துரைத்தல்.

2. ஊடகங்களின் ஆழமான நுண்ணறிவை வெளிப்படுத்துதல்.

பயன்கள்:

1. காப்பியங்களை பயில்வதன் மூலமாக மாணவர்கள் அறக்கருத்துக்களை
   உணர்ந்து கொள்ளுதல்.

2. தமிழ் மொழியை செம்மொழியாக அறிவித்துள்ள இக்காலக்கட்டத்தில்
   தமிழ் இலக்கியத்தின் பயனை மாணவர்கள் முழுமையாக அறிந்துக் கொள்ளுதல்.

3. ஊடகங்கள் வெளிப்படுத்தும் நன்மை, தீமை ஆகியவற்றைப் பகுத்தறியக்
   கூடிய பக்குவத்தை அடைதல்.

அலகு:1 செய்யுள்
        இயற்கை
        நாட்டுப்பற்று
        உழைப்பு

அலகு:2 செய்யுள்
        மானம்
        பெண்ணுரிமை
அலகு:3
        தமிழ் இலக்கிய வரலாறு

சோழர் காலம்

அலகு:4

நாடகம்

தண்ணீர் தண்ணீர் - கோமல் சுவாமிநாதன்

அலகு:5

கோயிற்கலை   - திட்டக்கட்டுரை, வினாடி வினா

பாட நூல்கள்

1. செய்யுள் நூல்   - தமிழ்த்துறை வெளியீடு

2. தமிழ் இலக்கிய வரலாறு   - தமிழ்த்துறை வெளியீடு

3. நாடகம் - தண்ணீர் தண்ணீர்   - கோமல் சுவாமிநாதன்

4. கோயிற்கலை   - தமிழ்த்துறை வெளியீடு

HOLY CROSS COLLEGE (AUTONOMOUS) TIRUCHIRAPPALLI-620002
DEPARTMENT OF HINDI
PART – I LANGUAGE HINDI FOR B.A, B.Sc & B.Com
HINDI PAPER-III POETRY, PREDICS, HISTORY OF HINDI LITERATURE
SEMESTER – III

HRS/WEEK : 6   **CODE: U14HN3HIN03**
CREDITS : 3   **MARKS : 100**

UNIT – I **:** Shubhagaman, Man, Tere ghar ked war bahuth hym
          Memory poem : - Kabir das Ke Dohe - 6
          Thulasidas Ke Dohe - 6 Rahim Ke Dohe - 6

UNIT- II **:** History of Hindi Literature :
          Essay Type Questions : Veeragatha Kaal

UNIT- III : Bakthi Kaal

UNIT- IV : Poetics

   a. Ras : Shringar, karun, Hasya, Veer
   b. Alankar : Anupras, Yamak, Upama, Roopak
   c. Chand : Choupayee, Baravai

UNIT- V : Kavi Parichaya : Ayodiya singh upadyaya Harioudh, Maithili Sharan
       Gupth,Siyaram Sharan Gupth, Kabir, Thulasi das

   Books Prescribed :

   • Naveen Padhya Rathnakar– D.B.H.P. Sabha Publishers, Chennai-17
   • Pracheen Padhya Sangrah– D.B.H.P. Sabha Publishers, Chennai-17
   • Hindi Sahitya Ka Sanshitpta Itihas – Rajnath Sharma, Agrwal Publication,Uttar
     Prakash
   • Kavya Pradeep   –   Ram Bahori Shukla, Hindi Bhavan, Illahabad.

HOLY CROSS COLLEGE (AUTONOMOUS), TIRUCHIRAPPALLI – 2
DEPARTMENT OF FRENCH
SYLLABUS
SEMESTER III
PART I - LANGUAGE - FRENCH PAPER III [LANGUAGE & CIVILISATION
(ÉCHO A2 2e édition)]
(For candidates admitted 2013 onwards)

HRS/WEEK : 6   CODE : U14FR3FRE03

CREDIT : 3   MARKS : 100

Unit 1 Vivement demain !

Le futur, la comparaison des qualités, des quantités et des actions – la santé – le travail dans trente ans – la vie quotidienne - l'éducation et la formation (l'enseignement en France) – faire des projets.

Unit 2 Tu as du boulot ?

Le pronom « en » et « y » - exprimer une condition : si + présent, si + passé composé, exprimer des préférences – les emplois de demain - des idées pour créer une entreprise – le travail en France.

Unit 3 Qu'en pensez-vous?

L'emploi du subjonctif , l'expression de la quantité – revue de presse – entrée en politique – la naissance des départements - la vie politique – l'organisation administrative et politique de la France.

Unit 4 C'est tout un programme !

Les propositions relatives, la formation des adverbes, la forme « en + participe présent » - parler de la télévision et de la radio - comment les Français s'informent (la télévision et la presse en France)

Unit 5 On se retrouve

L'emploi et la conjugaison de l'indicatif – parler de son apprentissage du français langue étrangère – les rencontres : modes et comportements – une vraie vie de quartier grâce à Internet – formules pour un premier contact par écrit.

TEXT BOOKS :

ECHO A2 – METHODE DE FRANÇAIS & CAHIER PERSONNEL D'APPRENTISSAGE
Authors: J. Girardet and J. Pécheur
Publication: CLÉ INTERNATIONAL, 2010.

NO.OF HRS/WK:6   **CODE:U10EL3GEN03**
NO.OF CREDITS: 3

OBJECTIVES
To reinforce the LSRW skills of students.
To enhance their study skills and literary skills through a selection of prose extracts. To develop soft skills such as presentation and group discussion skills.
To strengthen sub skills including vocabulary, grammar, comprehension, argumentative and imaginative writing

UNIT I

A Little Bit of What You Fancy : *Desmond Morris*

UNIT II
The Avenger :*Anton Chekov*

UNIT III
Know When to Say 'It's None of Your Business': *Mark McCormack*

UNIT IV
The Second Crucifixion: *Larry Collins and Dominique Lapierre*

UNIT V
General Essay – 5 topics given

 Idioms and Phrases - 20 Idioms and phrases given

BOOKS FOR REFERENCE

Anand, Renu .,&Rajeevan, Geetha. *Images of Life: An Anthology of Prose*. New Delhi:
        Foundation Books, 2007. Print.

List of Idioms and Phrases:

1.	To tuckin
2.	In tunewith
3.	To frown upon
4.	In favourof
5.	In vogue
6.	To gloatat
7.	On thecontrary
8.	Promptedby
9.	To pale tonothing
10.	To waxenthusiastic
11.	To figure oneout
12.	Crystalclear
13.	Greyarea
14.	To have secondthoughts
15.	On redalert
16.	On a fool'serrand

17.	To be takenaback
18.	To storm
19.	Troublespots
20.	Flood ofhumanity

GENERAL ESSAY TOPICS

1. Women are not as intelligent asmen.
2. The use of the internet and thecomputer.
3. Life in the nextdecade.
4. The ways of using the cell phone to minimize healthhazards.
5. How will you save the planet?

MAJOR CORE 4: DATABASE SYSTEMS

Hours/Week:5   **Code: U11CA3MCT04/U11CS3MCT04**
Credits   :5   **Marks:100**

OBJECTIVE
To impart the fundamental aspects of database design, database languages and database-system implementation.

UNIT I

INTRODUCTION : Database System Applications – Purpose of Database Systems – View of Data – Database Languages – Relational Databases – Database Design – Object-Based and Semistructured Databases – Data Storage and Querying – Transaction Management – Data Mining and Analysis – Database Architecture – Database Users and Administrators – History of Database Systems.

UNIT II

RELATIONAL MODEL : Structure of Relational Databases – Fundamental Relational-Algebra Operations – Additional Relational-Algebra Operations – Extended Relational-Algebra Operations – Null Values – Modification of the Database.

UNIT III DATABASEDESIGN
Database Design and the E-R Model: Overview of the Design Process – The Entity-Relationship Model – Constraints – Entity-Relationship Diagrams – Entity-Relationship Design Issues – Weak Entity Sets. **Normalization:** The Purpose of Normalization – How Normalization Supports Database Design – Data Redundancy and Update Anomalies – Functional Dependencies – The Process of Normalization – First Normal Form - Second Normal Form - Third Normal Form – General Definitions of 2NF and 3NF. **Advanced Normalization:** Boyce Codd Normal Form **-** Fourth Normal Form – Fifth NormalForm.

UNIT IV

SQL AND ADVANCED SQL : Background – Data Definition – Basic Structure of SQL Queries – Set Operations – Aggregate functions –Null Values – Nested Sub queries – Complex Queries – Views – Modification of the databases of the database –Joined Relations. SQL data types & schemas – Integrity constraints- Authorization – Embedded SQL- Functions and procedural Constructs - Recursive Queries – Advanced SQLFeatures.

UNIT V

DATA STORAGE AND TRANSACTION MANAGEMENT
Storage and File Structure: Overview of physical Storage Media– File Organization – Organization of Records in files-Data Dictionary storage. **Transaction :** Transaction Concept – Transaction State – Implementation of Atomicity and Durability – Concurrent Executions – Serializability - Recoverability.

TEXT BOOKS

1.   Abraham Silberschatz, Henry F. Korth, S. Sudarshan, "**Database System Concepts**", 2006, Fifth Edition, McGraw-HillPublications.
UNITI   **:** Chapter 1(1.1-1.13)
UNITII   **:** Chapter 2(2.1-2.6)
UNIT III   **:** Chapter6(6.1-6.6)
UNIT IV   **:** Chapters 3(3.1-3.11),4(4.1-4.6)
UNITV   **:** Chapters11(11.1,11.6-11.8),15(15.1-15.6)
2.   Thomas Connolly, Carolyn Begg, "**Database Systems**" ,2009, Fourth Edition, Pearson Eduction Ltd.,NewDelhi.
UNIT III : Chapters 13(13.1 – 13.9), 14(14.2,14.4 – 14.5)

REFERENCE BOOKS

1. Alexis Leon and Mathews Leon, **Database Management Systems**, 2002, Vikas PublishingHouse Pvt, Ltd., NewDelhi.

2. Desai Bipin C., **An Introduction to Database Systems**, 2001, Galgotia Publications Ltd., New Delhi.

3. Elmasri & Navathe, **Fundamentals of Database Systems**, 2006, Pearson Education Publications, New Delhi.

4. Ragu Ramakrishnan, **Database Management System**, 2000, Tata McGraw Hill Publications Company Limited, NewDelhi.

5. Ramez Elmasri, Navathe Shamkant B, **Fundamentals of Database Systems**, 2001, Addison Wesley Longman Publications Pvt. Ltd., New Delhi.

Hours/Week:5   **Code:U13CA3MCP05**
Credits:5   **Marks:100**

1. Table creation and simplequeries.

2. Queries using aggregatefunctions.

3. Queries using setOperators.

4. Table creation with variousjoins.

5. Partitioned tablecreation.

6. Nested sub queries and correlated subqueries.

7. View creation andmanipulations.

8. PL/SQL program to prepare marksheet.

9. PL/SQL program to prepare apayslip.

10.PL/SQL program to prepare the electricityBill.

11.PL/SQL program to prepare the multiplication table for a givennumber.

12.PL/SQL program to count the number of characters and digits in astring.

Allied 4 - APPLIED MATHEMATICS III
(for Computer science students)

Total Hours: 60
Hours/Week: 4   **Code:U11MA3AOT13**
Credits: 3   **Marks:100**

GENERAL OBJECTIVE:
To enable the students to acquire the knowledge on numerical and certain statistical concepts.

UNIT I : INTERPOLATION AND SOLUTION OF ALGEBRAIC AND TRANSCENDENTAL EQUATIONS
Newton Gregory forward and backward interpolation formulae-Lagrange's Interpolation formula.Solving algebraic and transcendental equations – Bisection, False position and Newton Raphson methods.

UNIT II : SOLUTION OF SIMULTANEOUSEQUATIONS
Gauss elimination – Finding inverse of a matrix using Gauss elimination method – Iterative methods.Gauss Jacobi and Gauss Seidal methods.

UNITIII : NUMERICAL INTEGRATION:
Trapezoidal rule and simpsons 1/3 rule. Solving differential equations (1st order differential equations only) – solutions by Euler's method – rungeKutta 2nd and 4th order method.

UNIT IV :ANALYSIS OF TIME SERIES
Time Series - components of Time Series - measurement of trend - measures of seasonal variation(Methods of simple averages and Link relatives only) - problems (Deseasonalization is excluded)

UNIT V :INDEX NUMBERS
Index Numbers – Laspeyer's,Fisher's and Paasche's index numbers- tests for Index Numbers - cost of living Index Number - uses of Index Numbers.

TEXT BOOKS:
1. Venkataraman M.K(2006), **"NUMERICAL METHODS IN SCIENCE ANDENGINEERING"**, National Publishing House,Chennai
2. PillaiR.S.N ,Bagavathi .V (2007) **"STATISTICS"**S.Chand and Company ,New Delhi

REFERENCE:
1.Freedman,David,(2006), "**STATISTICS",**Viva Books PvtLtd,NewDelhi.

2.Kalavathy .S,(2004),"**NUMERICAL METHODS "** .Thomson Publishers,Newdelhi.

3.Kandaswamy .P,(2001), "**NUMERICAL METHODS"** , S.Chand& co,Newdelhi.

4.Vedamuruthy.V.N,(2005),"**NUMERICAL METHODS"**,VikasPublishers,Newdelhi.

SKILL BASED ELECTIVE-3: MULTIMEDIA AND ANIMATION LAB

Hours/Week:2   **Code:U13CA3SBP03**
Credits   :2   **Marks:100**

EXERCISES :

1. Creating, Opening, Saving, and Closing aFile.

2. Working with Tools ofPhotoshop

3. Working with Paints and Colours inPhotoshop

4. Working on an Image inPhotoshop

5. Creating WebImages.

HOLY CROSS COLLEGE (AUTONOMOUS), TIRUCHIRAPPALLI-2
B.A. /B.Sc. / B.Com. / B.R.Sc. / B.C.A./B.B.A DEGREE COURSE
II YEAR: SEMESTER - III
(From 2012 onwards)
GENDER STUDIES

Hours:1Hr/wk   **CODE: U12WS3GST01**

                                        CREDITS:1

Objectives

To make boys and girls aware of each other's strength and weakness.

To develop sensitivity towards both genders in order to lead an ethically enriched life.

To promote attitudinal change towards a gender balanced ambience and women empowerment.

Unit I Concepts of Gender :

Sex-Gender-Biological Determination-Patriarchy-Feminism-Gender Discrimination-Gender Division of Labour - Gender stereotyping – Gender Sensitivity-Gender Equity – Equality – Gender Main streaming – Empowerment.

Unit II Women's Studies Vs Gender Studies:

UGC's Guidelines – VII to XI Plans –

Gender Studies : Beijing Conference and CEDAW-Exclusiveness and Inclusiveness.

Unit –III Areas of Gender Discrimination :

Family – Sex Ratio – Literacy – Health – Governance – Religion Work Vs Employment –

Market – Media – Politics – Law – Domestic Violence – Sexual Harassment – State Politics and Planning.

Unit – IV Women Development and Gender Empowerment :

Initiatives – International Women's Decade – International Women's Year – National Policy for Empowerment of Women – Women Empowerment Year 2001 – Mainstreaming Global Policies.

Unit – V Women's Movements and Safeguarding Mechanism:

In India National / State Commission for Women (NCW) – All Women Police Station – Family Court – Domestic Violence Act – Prevention of Sexual Harassment at Work Place Supreme Court Guidelines – Maternity Benefit Act – PNDT Act – Hindu Succession Act 2005 – Eve Teasing Prevention Act – Self Help Groups – 73rd Amendment forPRIs.

BOOK FOR STUDY

Manimekalai. N & Suba. S (2011), Gender Studies, Publication Division, Bharathidasan University, Tiruchirappalli

HOLY CROSS COLLEGE (AUTONOMOUS), TIRUCHIRAPPALLI-2
B.A. /B.Sc. / B.Com. / B.R.Sc./ B.C.A. DEGREE COURSE
LIFE ORIENTED EDUCATION
ETHICS – II: EMPOWERMENT OF WOMEN

HRS / Wk: 1   CODE:U12VE4LVE02
CREDIT : 1   MARKS : 100

OBJECTIVES:

- To make the learners aware of various Social, Gender issues and CyberCrimes.
- To make them aware of the propertyrights.
- To make them understand and appreciate the role of media, in facing the challenges on various lifeissues.

UNIT – I: GENDER ISSUES

Feminism attitude of men and women towards women, Gender Identity-Factors contributing to gender identity (Family values, culture, tradition, religion, societal values, mass media)

UNIT – II: WOMEN AND MEDIA

Portrayal of women in media, Media world - News paper, Magazine, Cinema, TV, Video and Advertisements - Morality in Media and Right use of Media

UNIT – III: SOCIAL ISSUES RELATED TO WOMEN

Eve teasing, Rape, Dowry, Harassment in marriage, Divorce and Widows Remarriage, HIV & AIDS, Transgender, Female Genocide, sex workers, trafficking, fugitive, Female foeticide, handicapped children and women and evils of drug abuse

UNIT – IV: WAYS OF EMPOWERING WOMEN

Need for empowerment –Skills required for empowerment and Career Oriented Skills, Women's bill- Property rights, Models of Empowered Women-Mother Teresa, Indira Gandhi, and Helen Keller, Chanu Sharmila and Malala

UNIT – V: CYBER CRIME AGAINST WOMEN

Harassment and Spoofing via e-mail, Cyber Stalking, Cyber Pornography, Morphing - Cyber Laws, social network, face book, and twitter

REFERENCES:

1. Dr.M.Arumairaj et al., 1999, "Marching towards the Milleniumahead".
2. Thomas Anjugandam, 1999, "Grow Free Live Free" SalesianPublicaiton.
3. H.C Pretti Nandhini Upretti, jaipur 2000 "Women and problems of GenderDiscrimination".
4. Thomas B.Jayaseelan, 2002, "Women: Rights and law" Indian Social Institute, NewDelhi.
5. Reni Jacob vol I & II, April- June 2004, "Vikasimi – The journal of Women's Empowerment,Ed,"

HOLY CROSS COLLEGE(AUTONOMOUS) TRICHIRAPALLI-2.
B.A/B.Sc./B.Com/B.R.Sc/B.C.A – DEGREE COURSES
LIFE ORIENTED EDUCATION
BIBLE STUDIES – II: OLD TESTAMENT

HRS /WK:1   **CODE:U12VE4LVB02**

CREDIT:1   **MARKS : 100**

OBJECTIVE:
- Understanding the desires of God through Prophetic revelation and becoming sensitive to the heart beat ofGod.

UNIT – I: PURPOSE OF LIFE

Creation of man – fall of man (Gen 1-4)

Plan of redemption through the life of :

- Noah (Gen 6-9); Abraham (Gen 12-18);

- Joseph (Gen 37-40); Moses (Exo4-5);

- Joshua (Joshua1-8)

UNIT – II: JUDGES AND KINGS

- **JUDGES:** Deborah (Judges 4); Samson (Judges 6-8); Gideon (Judges13-16)

- **KINGS:** David (I Sam 17-31, II Sam 1-12); Solomon (I Kings 1-11, Proverbs1-5,31)

UNIT – III: WOMEN IN THE BIBLE

- Women in the OldTestament

- Eve (Gen3)

- Ruth (Ruth1-4)

- Hannah (I Sam1:1-28)

- Esther (Esther1-6)

UNIT – IV: MINOR PROPHETS

- Brief Life History and teachings of

- Amos

- Jonah

- Micah

- Nahum

- Habakkuk

UNIT – V: MAJOR PROPHETS

- Brief Life History and teachings of
- Elijah(I Kings17-19)
- Elisha(II Kings4-6)
- Isaiah (Is1,6,11,36-38,40-42,44,50,53,61)
- Jeremiah (Jer1-3,7-12,18-19,23)
- Daniel (Daniel1-6)

REFERENCES:

1. Missionaries Biographies. 1995,Amazon.com
2. Russell Fueller (1999) The Text book of the Twelve Minor Prophets. Wipf &Stock Publishers,UK.
3. Willis Judson Beecher (2002) The Prophets and The Promise. Wipf & Stock Publishers, UK

B.A./ B.Sc./ B.Com/ B,R.SC/ B.C.A - DEGREE COURSES
LIFE ORIENTED EDUCATION
CATECHISM – II: CHURCH AND
SACRAMENTS

HRS / Wk: 1   **CODE :U12VE4LVC02**
CREDIT : 1   **MARKS : 100**

OBJECTIVES:

- To instruct the students to live in relationship withGod.
- To offer God's gift of the HolySpirit.
- To build relationship with Jesus.
- To learn Sacraments and Prayer life through which a Christian is able to live in relationship with Christ.
- To enrich our devotion to Mother Mary andSaints.

UNIT - I: MISSION OF THE CHURCH

What is church (attributes) – Interpretation: body of the Christ- Bride of Christ, goal of all things- Historical as well as spiritual- Mystery and Sacrament-Pilgrim Church.

UNIT – II: PARTICIPATORY CHURCH (AS LAY FAITHFUL) AS A COMMUNITY

Work of the holy Spirit- Salt and leaven in the world "Church of modern World" Church as community – Its important aspect, early Christian Church – People of God as Church- Its characteristic and structure

UNIT – III: THE FUNCTIONARY CHURCH AND I

Ministerial Church – Relating Church –Parish Church- Role of lay faithful in the Church – Its challenges – Church and I.

Sacraments – Initiation- Social – Healing (all the seven) - stress on Confession, Confirmation and Holy Communion. Sacramental: holy "things" used –their sanctity.

UNIT – IV: SACRAMENTS AND SACRAMENTAL

Sacraments-Initiation-Social-Healing (all the seven)-stress on Confession, Confirmation and Holy Communion. Sacramental: holy "things"used-their sancity.

UNIT – V: MARY AND SAINTS

Mary as a young virgin- Disciple- Her role in the Catholic Church-Annual feasts- Pilgrimages-Devotion to Mary, Theologies. Saints in the Church- 10 women saints.

REFERENCES :

1. "Vatican II Revised" Archbishop Angelo Fernandes Published by X.Diax de RioS.J. Gujarat Sahitya Prakash, P.O.Box. 70, Gujarat, 388001, India.

2. "The Sacraments The Word of God at the Mercy of theBody" Claretian Publications, Malleswaram, Bangalore560055.

Total Hours : 75	**Code : U12TL4TAM04**
Hrs : 5Hrs /Wk	**Marks : 100**
Credit : 3	

நோக்கங்கள்:

1. மாணவர்களுக்குத் தமிழர்தம் வாழ்வியல் விழுமியங்களை உணர்த்துதல்.

2. அறநெறிகள் வாழ்க்கைக்கு வழிகாட்டும் விதத்தினை எடுத்துரைத்தல்

3. சிகரம் தொட்ட படைப்பாளிகளின் சிந்தனைகளை வெளிப்படுத்தல்

4. மொழித்திறன் வளர்த்தல்.

பயன்கள்:

1. வாழ்க்கையின் பல்வகை நிலைகளையும் உணர்ந்து செயல்படச் செய்தல்

2. தன்னைத் தானே நெறிப்படுத்திக்கொள்ள, பயன்பாடடைய இலக்கியம் வழிகாட்டுவதை புரிந்துகொள்ளச் செய்தல்.

3. இடைவிடாத முயற்சியின் வெற்றிப்படிகளைக் கண்டுணர்ந்து மேன்மை அடையச் செய்தல்.

4. இருமொழிப் புலமையை வளர்த்தல்.

அலகு:1 செய்யுள்

கடமை

காலந்தவறாமை

ஒற்றுமை உணர்வு

அலகு:2 செய்யுள்

நட்பு

குடும்பமும் விருந்தோம்பலும்

அலகு:3

தமிழ் இலக்கிய வரலாறு

சங்ககாலம் - சங்கம் மருவியகாலம்

எட்டுத்தொகை, பத்துப்பாட்டு, பதினெண்கீழ்க்கணக்கு நூல்கள்

அலகு:4

உரைநடை
சங்க இலக்கியம் (பெண்பாற் புலவர்கள்)
கட்டுரைத் தொகுப்பு

அலகு:5

பொது – மொழிபெயர்ப்பு

பாட நூல்கள்

1. செய்யுள் நூல்   - தமிழாய்வுத்துறை வெளியீடு
2. தமிழ் இலக்கிய வரலாறு   - தமிழாய்வுத்துறை வெளியீடு
3. சங்க இலக்கியம் கட்டுரைத் தொகுப்பு   - தமிழாய்வுத்துறை வெளியீடு
4. மொழிபெயர்ப்பு   - தமிழாய்வுத்துறை வெளியீடு

HOLY CROSS COLLEGE (AUTONOMOUS) TIRUCHIRAPPALLI-620002
DEPARTMENT OF HINDI
PART – I LANGUAGE HINDI FOR B.A, B.Sc & B.Com
HINDI PAPER-IV FUNCTIONAL HINDI & TRANSLATION
SEMESTER – IV

HRS/WEEK : 5   **CODE: U14HN4HIN04**
CREDITS : 3   **MARKS : 100**

UNIT – I   Functional Hindi

UNIT- II   Adhunic Kaal

UNIT- III General Essays

>   Parishram Ka Mahatva, Anushasan, Paropakar, Jawaharlal
>   Nehru, Deepavalli, Bharath Mein Computer

UNIT- IV   Letter Writing
UNIT- V   Anuvad Abhyas - III

Books   Prescribed :

- General Essays   - D.B.H.P. Sabha Publishers, Chennai-17
- Abinava Patra Lekhan   - D.B.H.P. Sabha Publishers, Chennai-17
- Anuvad Abhyas – III   - D.B.H.P. Sabha Publishers, Chennai-17

HOLY CROSS COLLEGE (AUTONOMOUS), TIRUCHIRAPPALLI – 2
DEPARTMENT OF FRENCH
<u>SYLLABUS</u>
SEMESTER IV
PART I - LANGUAGE - FRENCH PAPER IV [LANGUAGE & CULTURE
(ÉCHO A2 2e édition)]
(For candidates admitted 2013 onwards)

HRS/WEEK : 5   **CODE : U14FR4FRE04**

CREDIT : 3   **MARKS : 100**

Unit 1 C'est la fête !

Les pronoms objets directs et indirects – parler d'une fête – exprimer des goûts et des préférences – fêtes sans frontières – plats des fêtes – les jours fériés – les saisons – le calendrier – les fêtes traditionnelles, importées, francophones.

Unit 2 Vous plaisantez !

Le conditionnel présent, la distinction du futur et du conditionnel – le mouvement en général – raconter une anecdote – journée de détente – la naissance d'un chef d'œuvre - l'art au début du 20e siècle – le plaisir de jeux de mots.

Unit 3 On s'entend bien !

Les constructions « faire + verbe » et « laisser + verbe », le discours rapporté – décrire le caractère ou le comportement, exprimer l'accord et le désaccord – le langage des couleurs – sujets de conversation – sujets d'étonnement.

Unit 4 À vos risqué et périls !

Le subjonctif présent, la voix passive – l'aventure aujourd'hui – travailler pour la planète – réussites et échecs - marathon de Paris – plaisir des sports – les sports les plus regardés et pratiqués - les français et les sports – les jeunes issus de l'immigration.

Unit 5 La vie est dure

Les pronoms possessifs, les adjectifs, les pronoms indéfinis – parler de ses activités quotidiennes, exprimer la confiance ou la méfiance – les taches ménagères – la France insatisfaite - sans travail – la chanteuse Diam's – le film 'Le Couperet de Costa-Gavras'.

TEXT BOOKS :
ECHO A2 – METHODE DE FRANÇAIS & CAHIER PERSONNEL D'APPRENTISSAGE
Authors: J. Girardet and J. Pécheur
Publication: CLÉ INTERNATIONAL, 2010.

NO.OFHRS/WK:6   **CODE:U13EL4GEN04**
NO.OF CREDITS: 3

OBJECTIVES
To strengthen the LSRW skills of students through inter-active approaches, participatory methods and activity oriented exercises.
To develop skills required for referential and independent learning.
To focus on writing skills like creative and comparative writing and book reviews.
To reinforce sub skills including vocabulary, grammar, dialogue, report writing and note making.

UNIT I: READ AND COMMUNICATE: HISTORICAL SKETCHES
The Renaissance India under the British Raj
UNIT II: READ AND COMMUNICATE : MODERN FABLES
Nonchi Nona and Kotiya the Cat The Competition
UNIT III: READ AND COMMUNICATE : MODERN FABLES
The Nightingale and the Rose The Butterfly that Stamped
UNIT IV -READ AND COMMUNICATE : BIOGRAPHIES AND MODERN FABLES
Napoleon Bonaparte The Hiding Place
UNIT V

GRAMMAR   - Tenses

COMPREHENSION   -General

COMPOSITION

1. Notemaking
2. Dialogue
3. CreativeWriting
4. NarrativeWriting
5. Imaginative Writing

GENERAL ESSAY – 5TOPICS

1. Should capital punishment beabolished?
2. Is a corruption- free India adream?
3. The nuclear family and its consequent changes insociety.
4. The threat ofterrorism.
5. If man becomesimmortal…

THINK BETTER - READ AND COMMUNICATE : MODERN FABLES
1 – 10 for Internal Testing
BOOKS FOR REFERENCE
OraneeJansz : EXPLORATIONS *A Course in reading, thinking and communication skills*.
New delhi: Cambridge university press. 2004. Print.

List of words \ compound words\phrases for making sentences:
1.   Store house ofknowledge
2.   Genre
3.   To be dividedover

4. Taboo
5. To takeover
6. Hump
7. Bushy
8. Tiered
9. To roll from side toside
10. Flickered
11. To sailthrough
12. To tremble allover
13. Ecstasy
14. Thunder-clap
15. Mousy-quite
16. Collision
17. Exiled
18. Revolution
19. To comeround
20. To fight for acause

HOLY CROSS COLLEGE (AUTONOMOUS), TIRUCHIRAPALLI – 2
B.C.A. : SEMESTER IV
(For Candidates admitted from June 2014 Onwards)
MAJOR CORE 6: JAVA PROGRAMMING

Hours /Week:5   **Code:U12CA4MCT06**
Credits   :5   **Marks:100**

OBJECTIVE:
To provide a sound appreciation of the fundamentals, the syntax of the language, as well as the powerful concepts and their applicability in real-world problems.

UNIT I

JAVA EVOLUTION : Java History – Java Features – How Java Differs from C and C++ -- Java and Internet – Java and World Wide Web – Web Browsers – Hardware and Software Requirements – Java Support Systems – Java Environment.
OVERVIEW OF JAVA LANGAGE : Introduction – Simple Java Program – More of Java – An Application with Two Classes – Java Program Structure – Java Tokens – Java Statements – Implementing a Java Program – Java Virtual Machine – Command Line Arguments – Programming Style .
CONSTANTS,VARIABLES AND DATA TYPES : Introduction – 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.

UNIT II

OPERATORS AND EXPRESSIONS : Introduction – Arithmetic Operators – Relational Operators – Logical Operators – Assignment Operators – Increment and Decrement Operators – Conditional Operator – Bitwise Operators – Special Operators – Arithmetic Expressions – Evaluation of Expressions – Precedence of Arithmetic Operators – Type Conversions in Expressions – Operator Precedence and Associativity – MathematicalFunctions.
DECISION MAKING AND BRANCHING : Introduction – Decision Making with If Statement – Simple If Statement – The If ..Else Statement – Nesting of If..Else Statements – The Else If Ladder – The Switch Statement – The ? : Operator.
DECISION MAKING AND LOOPING : Introduction – The While Statement – The do Statement – The for Statement – Jumps in Loops – Labelled Loops .

UNIT III:

CLASSES, OBJECTS AND METHODS : Introduction – Defining a Class – Fields Declaration – Methods Declaration – Creating Objects – Accessing Class Members – Constructors – Methods Overloading – Static Members – Nesting of Methods – Inheritance : Extending a Class – Overriding Methods – Final Variables and Methods – Final Classes – Finalizer Methods – Abstract Methods and Classes – Methods with Varargs – Visibility Control.
INTERFACES : MULTIPLE INHERITANCE : Introduction – Defining Interfaces – Extending Interfaces – Implementing Interfaces – Accessing Interface Variables.

UNIT IV:

PACKAGES : PUTTING CLASSES TOGETHER : Introduction – Java API Packages – Using System Packages – Naming Conventions – Creating Packages – Accessing a Package – Using a Package – Adding a Class to a Package – Hiding Classes – StaticImport.

MULTITHREADED PROGRAMMING : Introduction – Creating Threads – Extending the Thread Class – Stopping and Blocking a Thread – Life Cycle of a Thread – Using Thread Methods – Thread Exceptions – Thread Priority – Synchronization – Implementing the „Runnable" Interface.

UNIT V:

MANAGING ERRORS AND EXCEPTIONS : Introduction – Types of Errors – Exceptions – Syntax of Exception Handling Code – Multiple Catch Statements – Using Finally Statement – Throwing Our Own Exceptions – Using Exceptions for Debugging.
APPLET PROGRAMMING : Introduction – How Applets Differ from Applications – Preparing to Write Applets – Building Applet Code – Applet Life Cycle – Creating an Executable Applet – Designing a Web Page – Applet Tag – Adding Applet to Html File – Running the Applet – More About Applet Tag – Passing Parameters to Applets – Aligning the Display – More About Html Tags – Displaying Numerical Values – Getting Input from theUser.

TEXT BOOK:

1. E.Balagurusamy , " **Programming with JAVA**", 2007 , Tata McGraw-Hill Publishing Company Limited , New Delhi.

UNITI   :   CHAPTERS 2, 3 &4
UNITII :   CHAPTERS 5, 6 & 7 **UNITIII:**CHAPTERS 8,10 **UNITIV:** CHAPTERS 11, 12 **UNITV :**   CHAPTERS13,14

REFERENCE BOOKS:

1. Ken Arnold, James Gosling, David Holmes, **The Java Programming Language**, 2005, Pearson Education Pvt. Ltd., NewDelhi.
2. Koparkar. P, **Java For You**, 2001, Tata McGraw-Hill Publications Pvt. Ltd., NewDelhi.
3. Dr. Muthu. C, **Programming with Java**, 2004, Vijay Nicole Imprints Pvt. Ltd.,Chennai.
4. Patrick Naughton , **The Java Hand Book**, 2002, Tata McGraw-Hill Publications Pvt. Ltd., New Delhi.
5. Xavier. C, **Projects on Java 2**, 2002, Scitech Publications India Pvt. Ltd.,Chennai.

MAJOR ELECTIVE - 1: JAVA PROGRAMMING LAB

Hours/Week:5   **Code:U12CA4MEP01**
Credits   :5   **Marks:100**

1. Simpleprograms.

2. Controlstructures

3. Classes & objects andmethods

4. Arrays

5. Interface

6. Inheritance

7. Packages

8. Multithreadedprogramming

9. Exceptionhandling

10. Applets

HOLY CROSS COLLEGE (AUTONOMOUS), TIRUCHIRAPALLI – 2
BACHELOR OF COMPUTER APPLICATION :SYLLABUS 2014 ONWARDS

SEMESTER IV
(For Candidates admitted from June 2014 Onwards)
MAJOR ELECTIVE 1:SYSTEM ANALYSIS AND DESIGN

Hours/Week:5   **Code:U14CA4MET01**
Credits   :3   Marks:100

OBJECTIVE

To learn the fundamental strategies of algorithm design. To devise and analyze various algorithms.

UNIT I

Algorithm Analysis – Asymptotic Notations – Conditional asymptotic notation – Removing condition from the conditional asymptotic notation - Properties of big-Oh notation – Solving recurrence equations – Analysis of linear search – loopcontrols

UNIT II

Divide and Conquer: General Method – Binary Search – Finding Maximum and Minimum – Greedy Algorithms: General Method – Container Loading – Knapsack Problem.

UNIT III

Dynamic Programming: General Method – Multistage Graphs – All-Pair shortest paths – Optimal binary search trees – 0/1 Knapsack.

UNIT IV

Backtracking: General Method – 8 Queens problem – graph coloring – Hamiltonian problem – knapsackproblem.

UNIT V

Techniques for Graphs - Connected Components and Spanning Trees – Biconnected components – General Methods (FIFO & LC) – 0/1 Knapsack Problem.

TEXT BOOKS

1. Ellis Horowitz, Sartaj Sahni and Sanguthevar Rajasekaran, Fundamentals of computer Algorithms.(Second Edition)Unverisites Press (India)Pvt.Limited.2007.(Unit2-5)

2. Easwarakumar K.S., Object Oriented Data Structures using C++, VikasPublishing House pvt. Ltd., 2000 (for Unit1)

REFERENCE BOOKS

1. Cormen T. H, Leiserson C. E, Rivest R.L, and Stein C., "IntroductiontoAlgorithms",Second Edition, Prentice Hall of India Pvt. Ltd,2003.

2. Alfred V. Aho, John E. Hopcroft and Jeffrey D. Ullman, "The Design and Analysis of Computer Algorithms", Pearson Education,1999.

3. Gilles Brassard, Paul Bratley, "Fundamentals of Algorithms", Prentice Hall of India PvtLtd, New Delhi,2005.

4. Seymour Lipschutz, "Theory and Problems ofData Structures", McGraw-Hill Book Company, International Editions,2000.

   Goodman S. E, and Hedetniemi S. T, " Introduction to the Design and Analysis of Algorithms", Tata McGraw Hill Publishing Company Limited, New Delhi,2002.

MAJOR ELECTIVE 1: SOFTWARE PROJECT MANAGEMENT

Hours/Week:5	**Code:U14CA4MET02**
Credits:3	**Marks:100**

OBJECTIVE

Capability of actively participating or successfully managing a software development project by applying project management concepts; ability to demonstrate knowledge of project management terms and techniques

UNIT I

Introduction to Software Project Management – Step Wise: An Overview of Project Planning – Project Evaluation.

UNIT II

Selection of an Appropriate Project Approach – Software Effort Estimation.

UNIT III

Activity Planning – Risk Management.

UNIT IV

Resource Allocation – Monitoring and Control.

UNIT V

Managing Contracts – Managing People and Organizing Teams – Software Quality.

TEXT BOOK

1. Bob Hughes and Mike Cotterell, "**Software Project Management**", 2004, Third Edition, Tata
McGraw Hill Edition.

   Chapters 1 to 12.

REFERENCE BOOKS

1. Walker Boyce, "**Software Project Management–A Unified Framework**", 2000, Addison Wesley Object Technology Series, Pearson Education.

2. Joel Henry, "**Software Project Management–A Real-world Guide to Success**", 2004, Pearson Education Private Limited.

3. Kieron Conway, "Software **Project Management–From Concept to Deployment**", 2004, Dreamtech Press.

4. Pankaj Jalote , "**Software Project Management in Practice**", 2002, Pearson Education.

5. S.A. Kelkar, "**Software Project Management, A Concise Study**", 2003, Revised Edition, Prentice-Hall India.

ALLIED 5(OPTIONAL) – BASICS OF ACCOUNTING

Hours/Week:4   CODE:U12CO4AOT08
Credits   :4   **Marks:100**

Unit I Introduction
Accounting Concepts – Conventions – Rules of Double Entry – Journal – Ledger – Trial Balance.

Unit II Accounting Cycle
Trading Account, Profit and Loss Account, Balance Sheet, Subsidiary Books – Purchases Book, Sales Book, Cash Book, Simple Cash Book, Petty Cash Book.

Unit III
Depreciation Accounting
Depreciation Accounting Straight Line Method, Written Down Value Method and Annuity Method.

Unit IV
Rectification of Errors
Rectification of Errors, Basic Principles for Rectification of Errors, Suspense Account, Errors Disclosed by Trial Balance, Guidelines to Locate Errors in the Trial Balance.

Unit V
Computer Accounting
Computer Accounting and Algorithm – Areas of Application of Computer in Accounting, Features and Advantages of Computers and Computer Accounting – Algorithm, Requisites of an Effective Algorithm
– Features of Algorithm.

Theory 40% & Problems 60%

Books for Study:

   T.S. Reddy and A. Murthy, "*Financial Accounting*" , 2004,Margham Publications.

Books for Reference:
   1. M.c. Shukla T.S. Grewal & SC Gupta , "**Advanced Accountancy**",2007, S. Chand and Co. Volume I

   2. Pillai and Bagavathy , "**Fundamentals of Advanced Accounting**",2004,S.Chand & Co.

   3. T.S. Reddy and Y. Hari Prasad Reddy, "**Financial and Management Accounting**",2012 Margam Publications.

   4. Financial Accounting , " **B. Charumathy and L. Vinayagam**", 2012,S.Chand & Company

HOLY CROSS COLLEGE (AUTONOMOUS), TIRUCHIRAPALLI – 2
B.C.A. : SEMESTER IV
(For Candidates admitted from June 2014 Onwards)
ALLIED 6(OPTIONAL): ACCOUNTING PACKAGE LAB – TALLY

Hours/Week:4   **Code:U12CA4AOP03**
Credits   :3   **Mark:100**

EXERCISES

1. Petty cash Entries, SubsidiaryBooks

2. Accounts Only – Accounts WithInventory

3. Accounts With Inventory TaxInitialize

4. StockCategories

5. CostCentre

6. CostCategories

7. StockJournal

8. BalanceSheet

9. Final Accounts WithoutAdjustments

10. Final Accounts withAdjustments

11. OrderProcessing

12. Price List

13. Bill-wise Details

HOLY CROSS COLLEGE (AUTONOMOUS), TIRUCHIRAPPALLI-2
B.A. /B.Sc. / B.Com. / B.R.Sc./ B.C.A. DEGREE COURSE
LIFE ORIENTED EDUCATION
ETHICS – II: EMPOWERMENT OF WOMEN

HRS / Wk: 1   CODE:U12VE4LVE02
                                                                                          CREDIT : 1
                                                                                          MARKS : 100

OBJECTIVES:

- To make the learners aware of various Social, Gender issues and CyberCrimes.
- To make them aware of the propertyrights.
- To make them understand and appreciate the role of media, in facing the challenges on various lifeissues.

UNIT – I: GENDER ISSUES

Feminism attitude of men and women towards women, Gender Identity-Factors contributing to gender identity (Family values, culture, tradition, religion, societal values, mass media)

UNIT – II: WOMEN AND MEDIA

Portrayal of women in media, Media world - News paper, Magazine, Cinema, TV, Video and Advertisements - Morality in Media and Right use of Media

UNIT – III: SOCIAL ISSUES RELATED TO WOMEN

Eve teasing, Rape, Dowry, Harassment in marriage, Divorce and Widows Remarriage, HIV & AIDS, Transgender, Female Genocide, sex workers, trafficking, fugitive, Female foeticide, handicapped children and women and evils of drug abuse

UNIT – IV: WAYS OF EMPOWERING WOMEN

Need for empowerment –Skills required for empowerment and Career Oriented Skills, Women's bill- Property rights, Models of Empowered Women-Mother Teresa, Indira Gandhi, and Helen Keller, Chanu Sharmila and Malala

UNIT – V: CYBER CRIME AGAINST WOMEN

Harassment and Spoofing via e-mail, Cyber Stalking, Cyber Pornography, Morphing - Cyber Laws, social network, face book, and twitter

REFERENCES:

1. Dr.M.Arumairaj et al., 1999, "Marching towards the Milleniumahead".
2. Thomas Anjugandam, 1999, "Grow Free Live Free" SalesianPublicaiton.
3. H.C Pretti Nandhini Upretti, jaipur 2000 "Women and problems of GenderDiscrimination".
4. Thomas B.Jayaseelan, 2002, "Women: Rights and law" Indian Social Institute, NewDelhi.
5. Reni Jacob vol I & II, April- June 2004, "Vikasimi – The journal of Women's Empowerment,Ed,"

HOLY CROSS COLLEGE(AUTONOMOUS) TRICHIRAPALLI-2.
B.A/B.Sc./B.Com/B.R.Sc/B.C.A – DEGREE COURSES
LIFE ORIENTED EDUCATION
BIBLE STUDIES – II: OLD TESTAMENT

HRS /WK:1   **CODE:U12VE4LVB02**
CREDIT:1   **MARKS : 100**

OBJECTIVE:
- Understanding the desires of God through Prophetic revelation and becoming sensitive to the heart beat ofGod.

UNIT – I: PURPOSE OF LIFE

Creation of man – fall of man (Gen 1-4)

Plan of redemption through the life of :

- Noah (Gen 6-9); Abraham (Gen 12-18);

- Joseph (Gen 37-40); Moses (Exo4-5);

- Joshua (Joshua1-8)

UNIT – II: JUDGES AND KINGS

- **JUDGES:** Deborah (Judges 4); Samson (Judges 6-8); Gideon (Judges13-16)

- **KINGS:** David (I Sam 17-31, II Sam 1-12); Solomon (I Kings 1-11, Proverbs1-5,31)

UNIT – III: WOMEN IN THE BIBLE

- Women in the OldTestament

- Eve (Gen3)

- Ruth (Ruth1-4)

- Hannah (I Sam1:1-28)

- Esther (Esther1-6)

UNIT – IV: MINOR PROPHETS

- Brief Life History and teachingsof

- Amos

- Jonah

- Micah

- Nahum

- Habakkuk

UNIT – V: MAJOR PROPHETS

- Brief Life History and teachingsof
- Elijah(I Kings17-19)
- Elisha(II Kings4-6)
- Isaiah (Is1,6,11,36-38,40-42,44,50,53,61)
- Jeremiah (Jer1-3,7-12,18-19,23)
- Daniel (Daniel1-6)

REFERENCES:

1. Missionaries Biographies. 1995,Amazon.com
2. Russell Fueller (1999) The Text book of the Twelve Minor Prophets. Wipf &Stock Publishers,UK.
3. Willis Judson Beecher (2002) The Prophets and The Promise. Wipf & Stock Publishers, UK

HOLY CROSS COLLEGE (AUTONOMOUS)
TIRUCHIRAPPALLI – 2
B.A./ B.Sc./ B.Com/ B,R.SC/ B.C.A - DEGREE COURSES
LIFE ORIENTED EDUCATION
CATECHISM – II: CHURCH AND SACRAMENTS

HRS / Wk: 1   CODE :U12VE4LVC02
CREDIT : 1`   MARKS : 100

OBJECTIVES:

- To instruct the students to live in relationship withGod.
- To offer God's gift of the HolySpirit.
- To build relationship with Jesus.
- To learn Sacraments and Prayer life through which a Christian is able to live in relationship withChrist.
- To enrich our devotion to Mother Mary andSaints.

UNIT - I: MISSION OF THE CHURCH

What is church (attributes) – Interpretation: body of the Christ- Bride of Christ, goal of all things- Historical as well as spiritual- Mystery and Sacrament-Pilgrim Church.

UNIT – II: PARTICIPATORY CHURCH (AS LAY FAITHFUL) AS A COMMUNITY

Work of the holy Spirit- Salt and leaven in the world "Church of modern World" Church as community – Its important aspect, early Christian Church – People of God as Church- Its characteristic and structure

UNIT – III: THE FUNCTIONARY CHURCH AND I

Ministerial Church – Relating Church –Parish Church- Role of lay faithful in the Church – Its challenges – Church and I.

Sacraments – Initiation- Social – Healing (all the seven) - stress on Confession, Confirmation and Holy Communion. Sacramental: holy "things" used –their sanctity.

UNIT – IV: SACRAMENTS AND SACRAMENTAL

Sacraments-Initiation-Social-Healing (all the seven)-stress on Confession, Confirmation and Holy Communion. Sacramental: holy "things"used-their sancity.

UNIT – V: MARY AND SAINTS

Mary as a young virgin- Disciple- Her role in the Catholic Church-Annual feasts- Pilgrimages- Devotion to Mary, Theologies. Saints in the Church- 10 women saints.

REFERENCES :

1. "Vatican II Revised" Archbishop Angelo Fernandes Published by X.Diax de RioS.J. Gujarat Sahitya Prakash, P.O.Box. 70, Gujarat, 388001, India.
2. "The Sacraments The Word of God at the Mercy of theBody" Claretian Publications, Malleswaram, Bangalore560055.

MAJOR CORE 7: COMPUTER ORGANIZATION AND ARCHITECTURE

Hours/Week:5   Code:U14CA5MCT07
Credits   :4   Marks:100

OBJECTIVE :
To give Basic Knowledge on Various Building Blocks of a Digital Computer and Architecture.

UNIT I

NUMBER SYSTEMS: Binary, Decimal, Octal, Hexadecimal – Conversion from one to another – Complements – ASCII – Excess 3 – Gray – Parity Generator and Checker.
DIGITAL LOGIC: Basic Logic Gates - Basic theorems and properties of Boolean algebra - NAND, NOR Implementation – K- Map – Pairs, Quads, Octet – K map Simplification – Sum of Product and Product of Sum – Don"t Care conditions.

UNIT II

COMBINATIONAL LOGIC CIRCUITS DESIGN: Multiplexers – De multiplexers – Encoders – Decoders - Arithmetic Building blocks – Half Adder – Full Adder –Half Subtractor – Full Subtractor. **FLIPFLOPS, REGISTERS, COUNTERS:** RS FlipFlop – JK FlipFlop – DFlipflop–T Flipflop – Edge triggered Flipflop – Master – Slave Flipflop –Types of Registers – Serial in SerialOut – Serial in Parallel out – Parallel in Serial out – Parallel in Parallel out – Counters – Ripple counter.

UNIT III

INPUT – OUTPUT ORGANIZATION: Peripheral Devices -- Input Output Interface – Asynchronous Data Transfer – Modes of Transfer – Priority Interrupt – Direct Memory Access - Input Output Processor – SerialCommunication.

UNIT IV

CENTRAL PROCESSING UNIT: General Register Organization – Stack Organization – Instruction Formats – Addressing Modes – Data Transfer and Manipulation.
PIPELINE AND VECTOR PROCESSING: Parallel Processing – Pipelining – Arithmetic Pipeline – Instruction Pipeline – RISC Pipeline – Vector Processing.

UNIT V

MEMORY ORGANIZATION: Memory Hierarchy – Main Memory – RAM and ROM Chips – Memory Address Map – Memory Connection to CPU – Auxiliary Memory – Magnetic Tape – Associative Memory -- Cache Memory – Virtual Memory – Memory Management Hardware.

TEXT BOOKS

Albert Paul Malvino, Donald. P.Leach , **Digital Principles and Applications**, 2002, Tata McGraw- Hill Publishing Company Limited, NewDelhi.

UNITI   **:** Chapters 2.1 -2.7, 3.1 - 3.8, 5.1 –5.8
UNITII   **:** Chapters 8.1 – 8.7, 9.1 – 9.5, 10.1 – 10.3,4.1 – 4.3,4.6

M. Morris Mono, **Computer System Architecture**,Third Edition, 2005, Prentice– Hall of India Private Ltd, New Delhi.

UNITIII   **:** Chapters11
UNITIV   **:** Chapters 8.1 – 8.6, 9.1 –9.6
UNITV   **:** Chapters12

REFERENCE BOOKS

1.   B.Govinderajalu, "**Computer Architecture and Organization**",2004 ,Tata McGraw – Hill Publishing Company, NewDelhi.

2.   William Stallings, " **Computer Organization and Architecture** ", 2006, 7th Edition ,Pearson Education.

3.   Carl Hamacher, Auonko Uranesic and Safwat Zaky , "**Computer Organization**", 2002, 5[th]Edition, Tata McGraw – Hill Publishing Company, NewDelhi.

4.   Kai Hwang , "**Advanced Computer Architecture**" , 2000, Tata McGraw – Hill Publishing Company, NewDelhi.

5.   P.Pal Chaudhuri, "**Computer Organization and Design**",2008, 3rd Edition , Prentice Hall of India Pvt Ltd, NewDelhi.

MAJOR CORE 8 - VISUAL PROGRAMMING

Hours/Week:5   Code:U13CA5MCT08
Credits   :4   Marks:100

OBJECTIVE
To highlight the framework, programming tools and techniques of VB.Net
To develop various windows applications in object oriented programming concept.

UNIT I
.NET FRAMEWORK AND VB.NET: Evolution of the .NET Framework – Overview of the .Net Framework – VB.NET – Simple VB.Net Program. **VARIABLES, CONSTANTS AND EXPRESSIONS:** Value Types and Reference Types – Variable Declarations and Initializations – Value Data Types – Reference Data Types – Boxing and Unboxing – Arithmetic Operators – Textbox Control – Label Control – ButtonControl.

UNIT II
CONTROL STATEMENTS: If Statements – Radio Button Control – CheckBox Control – Group Box Control – Listbox Control – Checked List Box Control – Combo box Control – Select Case Statement While Statement – Do Statement – For Statement. **METHODS AND ARRAYS:** Types of Methods– One Dimensional Array – Multi Dimensional Arrays – Jagged Arrays. **CLASSES:** Definition And Usage of a Class – Constructor Overloading – Copy Constructor – Instance and Shared ClassMembers – Shared Constructors.

UNIT III
INHERITANCE AND POLYMORPHISM: Virtual Methods – Abstract Class and Abstract Methods - Sealed Classes. **INTERFACES, NAMESPACES AND COMPONENTS:** Definition of Interfaces – Multiple Implementations of Interfaces – Interface Inheritance – Namespaces – Components – Access Modifiers. **DELEGATES, EVENTS AND ATTRIBUTES:** Delegates – Events – Attributes – Reflection.

UNIT IV
EXCEPTION HANDLING: Default Exception Handling Mechanism – User Defined Exception Handling Mechanism – Throw Statement – Custom Exception. **MULTITHREADING:** Usage Of Threads – Thread Class – Start(), Abort(), Join(), and Sleep() Methods – Suspend() And Resume() Methods – Thread Priority – Synchronization. **I/O STREAMS:** Binary Data Files – Text Files - Data Files – FileInfo and DirectoryInfo Classes.

UNITV

ADDITIONAL CONTROLS: Timer – ProgressBar – LinkLabel – Panel – TreeView – Splitter – Menu – SDI & MDI – Dialog Boxes – Toolbar – StatusBar. **DATABASE CONNECTIVITY:** Advantages Of ADO.NET – Managed Data Providers – Developing a Simple ADO.NET Based Application – Creation of Data Table – Retrieving Data From Tables – Table Updating – Disconnected Data Access Through Dataset Objects. **VALIDATION CONTROLS:** Validation controls, List controls.

TEXT BOOK

1. MuthuC,"**VisualBasic.NET**",SecondEdition,VijayNicoleImprintsPrivateLimited,Chennai, 2008.
UNIT I: Chapters 1, 3
UNIT II: Chapters 4, 5, 6
UNIT III: Chapters 7, 8, 9
UNIT IV: Chapters 10, 11, 12
UNIT V: Chapters 14, 15, 17

REFERENCE BOOKS

1. Peter Aitken"s, "**Visual Basic .NET Programming**", First Edition, Dream Tech Press.,2002.
2. Steven Holzner, "**Visual Basic.Net Black Book**", Published by Coriolis Group Books,2004.
3. Paul Lomax, Ron Petrusha, Steven Roman, "**VB.NET Language Pocket Reference**", Shroff Publishers & Distributors PVT. LTd./O'Reilly,2003.
4. Julia Case Bradley, Anita C. Millspaugh, "**Programming in Visual Basic.NET**", Fifth Edition, CareerEducation.
5. Richard Blair, Jonathan Crossland, Matthew Reynolds, Thearon Willis, "**Beginning VB.NET**", Second Edition, Wiley Publishing Inc.,2003.

HOLY CROSS COLLEGE (AUTONOMOUS), TIRUCHIRAPALLI – 2
B.C.A. : SEMESTER V
(For Candidates admitted from June 2014 Onwards)
MAJOR CORE 9: COMPUTER NETWORKS

Hours/Week: 5   **Code:U12CA5MCT09**
Credits   : 4   **Marks:100**

OBJECTIVE
To impart deep knowledge on different layers of Computer Networks.

UNIT I

INTRODUCTION: Uses of Computer Networks - Network Hardware - Network Software - Reference models OSI reference Model (TCP/IP reference Model, A comparison of the OSI and TCP/IP ReferenceModels).

UNIT II

THE PHYSICAL LAYER: Guided Transmission Media - Wireless Transmission - Communication Satellites - The Public Switched Telephone Network- Mobile Telephone System.

UNIT III

THE DATA LINK LAYER: Data Link Layer Design issues - Error Detection and Correction - Elementary Data Link Protocols - Sliding Window Protocols.

UNIT IV

THE NETWORK LAYER: Network Layer Design Issues - Routing Algorithms - Congestion Control Algorithms. **THE TRANSPORT LAYER**: The Transport Service (Services Provided to the Upper Layers, Transport Service Primitives) – Elements of Transport Protocols.

UNIT V

THE APPLICATION LAYER: DNS - Domain Name System - Electronic Mail - The World Wide Web. **NETWORK SECURITY:** Cryptography – Symmetric Key Algorithms – Public Key Algorithms.

TEXT BOOK

1. Tanenbaum Andrew . S, **Computer Networks**, 2006, Fourth Edition, Prentice-Hall India of India Pvt. Ltd., New Delhi.

UNITI	: Chapters 1 (1.1, 1.2, 1.3, 1.4.1 to 1.4.3)
UNITII	: Chapters 2 (2.2, to2.6)
UNITIII	: Chapters 3 (3.1 to3.4)
UNITIV	: Chapters 5 (5.1 to 5.3), 6 (6.1.1, 6.1.2,6.2)
UNITV	: Chapters 7 (7.1, 7.2, 7.3), 8 (8.1 to8.3)

REFERENCE BOOKS :

1. Black Uyless D., **Data Communication and Distributed Networks**, 2000, Prentice Hall of India Pvt. Ltd., NewDelhi.

2. Forouzan Behrouz A., **Local Area Networks**, 2003,   Tata McGraw Hill Publishing Limited, NewDelhi.

3. Godbole Achyut S., **Data   Communication and Networks**, 2002,Tata McGraw Hill Publishing Limited, NewDelhi.

4. Mansfield Kenneth C., Antonakos James L., **An Introduction to Computer Networking**, 2002, Prentice Hall of India, NewDelhi.

5. Tanenbaum Andrew S., **Computer Networks**, 2003, Pearson Education, Asia.

HOLY CROSS COLLEGE (AUTONOMOUS), TIRUCHIRAPALLI – 2
B.C.A. : SEMESTER V
(For Candidates admitted from June 2014 Onwards)
MAJOR CORE 10 - VISUAL PROGRAMMING LAB

Hours/Week:5   **Code:U13CA5MCP10**
Credits   :4   **Marks:100**

1. Develop an Image ViewerApplication.

2. Simulate a ScientificCalculator.

3. Simulate a Paint BrushApplication.

4. Design a Notepad Editor using DialogControl.

5. Create a VB.NET UI to Move an object using TimerControl.

6. Develop a Simple Student Information System UsingFiles.

7. Develop a College Admission Form UsingMDI.

8. Design a Bio – Data Application Form and enforceValidation.

9. Develop an Inventory Control System UsingADO.NET.

10. Develop a Continuous Internal Assessment System Using GridControl.

11. Develop Employee‟s Pay details for anorganization

12. Prepare bills for thefollowing:

     a) ElectricityBill

     b) TelephoneBill

HOLY CROSS COLLEGE (AUTONOMOUS), TIRUCHIRAPALLI – 2
B.C.A. : SEMESTER V
(For Candidates admitted from June 2014 Onwards)
MAIN ELECTIVE 2: COMPUTER GRAPHICS

Hours/Week:5   **Code:U12CA5MET02**
Credits   :5   **Marks:100**
OBJECTIVE:
   This course introduces the concept of Computer Graphics.

UNIT I

OVERVIEW OF GRAPHICS SYSTEMS: Video display devices: Refresh cathode-ray tubes - Raster- Scan Displays - Random-Scan Displays - Color CRT Monitors - Direct-View Storage Tubes - Flat- Panel Displays - Three-Dimensional Viewing Devices - Stereoscopic and Virtual-Reality Systems - Raster-Scan Systems: Video Controller - Raster-Scan Display Processor - Random-Scan Systems - Graphics Monitors and Workstations - Input Devices: Keyboards-Mouse - Trackball and space ball - Joysticks - Data Glove - Digitizers - Image Scanners - Touch Panels - Light Pens - Voice Systems- Hard CopyDevices.

UNIT II

OUTPUT PRIMITIVES: Points and Lines - Line-Drawing Algorithms: DDA Algorithm-Bresenham's Line Algorithm - Loading the Frame Buffer - Line Function - Circle-Generating Algorithms: Properties of Circles - Midpoint Circle Algorithm - Curve Functions – Fill-Area Functions – Character Generation.

UNIT III

ATTRIBUTES OF OUTPUT PRIMITIVES: Line Attributes: Line Type - Line width - Pen and Brush Options - Line color - Curve Attributes - Color and Grayscale Levels: Color Tables-Grayscale - Area-Fill Attributes: Fill Styles - Pattern Fill - Soft Fill - Character Attributes: Text Attributes - Marker Attributes - Bundled Attributes: Bundled Line Attributes - Bundled Area-Fill Attributes - Bundled Text Attributes - Bundled Marker Attributes -InquiryFunctions.

UNIT IV

TWO- DIMENSIONAL GEOMETRIC TRANSFORMATIONS: Basic Transformations:
Translation – Rotation -- scaling – Matrix Representations and Homogeneous Coordinates - Composite Transformations: Translations – Rotations -- Scaling. Other Transformations: Reflection -- Shear - Affine Transformations - Transformation functions - Raster Methods for transformations. **TWO – DIMENSIONAL VIEWING :** Window to View port Coordinate Transformations - Clipping Operations - Point Clipping - Line Clipping: Cohen Sutherland Line Clipping – Polygon Clipping: Sutherland-Hodgeman Polygon Clipping.

UNIT V

THREE DIMENSIONAL CONCEPTS: Three - Dimensional Display Methods: Parallel projection -- Perspective Projection -- Depth Cueing-- Visible Line and Surface – Identification - - Surface Rendering -- Exploded and Cutaway Views -- Three-dimensional and Stereoscopic views -- Three- Dimensional GraphicsPackages.
TWO – DIMENSIONAL VIEWING : Viewing Coordinates : Specifying the View Plane-- Transformation from World to Viewing Coordinates -- Projections: Parallel projection -- Perspective Projection.

TEXT BOOK :
1.Donald Hearn & M.Pauline Baker 'COMPUTER GRAPHICS' , 2006,Prentice Hall of India, New Delhi.

UnitI   : Chapter-2(2.1-2.6)
UnitII   : Chapter-3(3.1-3.5,3.9,3.12,3.14)
UnitIII   : Chapter-4 (4.1-4.7)
UnitIV   : Chapters 5(5.1 - 5.8), 6(6.3,6.5-6.7,6.8)
UnitV   : Chapters 9(9.1 – 9.2), 12(12.2 -12.3)

REFERENCE BOOKS :
1. AsthanaR.G.S   , Sinha.N.K, **Computer Graphics**, 2002, New Age International Publishers, NewDelhi.

2. Foley, Van Dam, Feiner Hugher, **Computer Graphics – Principles &Practice**,2004, Pe arson Education, NewDelhi.

3. Krishnamurthy N., **Introduction   to Computer Graphics**, 2002, Tata McGraw Hill Publishing Company Limited, New Delhi.

4. David Hillman, **Multimedia Technology and Applications**,2003,Galgotia Publications Private Ltd, NewDelhi.

5. Judith Jeffcoale, **Multimedia in Practice Technology and Applications**,2003, Prentice Hall ofIndia Private Ltd, NewDelhi.

Hours/Week :5	**Code:U14CA5MET04**
Credits :5	**Marks:100**
OBJECTIVE:	

OBJECTIVE: To develop full-fledged knowledge in **.NET Framework 4.5** and **VS 2012**, understand the dynamic programming concepts in **C#**, working with Graphic Rich desktop application in **WPF**, Functioning of Various **ASP.NET 4.5**Controls

UNIT I:

GETTING STARTED WITH .NET FRAMEWORK 4.5: Benefits of .NET Framework – Architecture of the .NET Framework 4.5 – New Features of .NET Framework 4.5 – **INTRODUCING VISUAL STUDIO 2012:** Exploring New features of Visual Studio 2012 – Exploring the Visual Studio 2012 Ultimate IDE – Performing Basic IDE Operations

UNIT II:

INTRODUCING C# 5.0 IN VS 2012: Need of C# - C# preprocessor Directives – New Features of C# 5.0 – Identifiers and Keywords –Expressions and operators – **NAMESPACES CLASSES, OBJECTS AND STRUCTS**: Classes and Objects – Constructors and Destructors – Static Classes and Members – Properties – Indexers - Structs - **FLOW CONTROL AND EXCEPTION HANDLING:** Control Flow Statements – Exception Handling – Checked and Unchecked Statements.

UNIT III:

INTRODUCING WPF 4.5 (Windows Presentation Foundation) – Understanding WPF Class Hierarchy – WPF Application Model – WPF Designer Interface – Exploring WPF Windows, Properties, Events & Dialog Boxes **– WORKING WITH WPF 4.5 CONTROLS, RESOURCES, STYLES, TEMPLATES AND COMMANDS:** Adding WPF Controls – Introducing Different Types of Controls in WPF – Using WPF Controls – Understanding Triggers

UNIT IV:

DATA ACCESS WITH ADO.NET: Understanding Databases – Understanding SQL – Understanding ADO.NET – Data Reader – Creating Connection Strings – Creating a Connection to a Database –

Creating a Command Object – Working with Data Adapters - **ASP.NET 4.5 ESSENTIALS:** Introducing New Features of ASP.NET 4.5 – Describing the ASP.NET Technologies – Describing ASP.NET Life Cycle – **DEVELOPING A WEB APPLICATION:** File Types in ASP.NET 4.5 – ASP.NET 4.5 Coding

Models – Understanding ASP.NET 4.5 Page Directives – Working with Server Controls

UNIT V:

WEB FORMS STANDARD CONTROLS: The Control Class – Standard Controls – User Controls and Custom Controls – **VALIDATION CONTROLS:** Validation in ASP.NET Web Forms – The Base Validator Class – The Required Field Validator Control – The Range Validator Control – The Regular Expression Validator Control – The Compare Validator Control – The Custom Validator Control – The Validation SummaryControl

TEXT BOOK:

1. Kogent Learning Solutions Inc., **".NET 4.5 Programming - Black Book"** (6-in-1 covers .Net 4.5 Framework, Visual Studio 2012, C# 2012, ASP.NET 4.5, VB 2012, and F# 3.0), 2013, Comprehensive Problem Solver, Dreamtech Press, New Delhi.
    UNITI   : Chapters 1,2
    UNITII   : Chapters 3, 4,7
    UNITIII   : Chapters 8,9
    UNITIV   : Chapters 12, 18,19
    UNITV   : Chapters 21,23
    (Note: In all the Chapters Specified Topics only)

REFERENCE BOOKS:

1. MridulaParihar,**‒ASP.NETBible"**,2004,WileyDreamtechIndia(P) Ltd.,NewDelhi
2. Matt J. Crouch, **"ASP.NET and VB.NET Web Programming"**, 2002, Pearson Education Publishing Ltd., NewDelhi
3. Chris Payne, **"SAMS Teach Yourself ASP.NET‖**, 2005, Pearson Education Publishing Ltd., New Delhi
4. Oberg Robert J., **"Introduction to C# using .NET"**, 2002, Pearson Education Publishing Ltd., NewDelhi.
5. Kogent Learning Solutions Inc., **"ASP.NET 4.0 Programming – Black Book"** , 2010, Comprehensive Problem Solver, Dreamtech Press, NewDelhi

MAJOR ELECTIVE 5 MOBILE COMPUTING
Hours/Week :5   Code:U14CA5MET05
Credits   :5   Marks:100

GENERAL OBJECTIVE
The objective of mobile application development is to know about Android Operating System for small, battery powered terminals equipped with the wireless network connection and to write the mobile applications.

UNIT I
INTRODUCTION TO ANDROID : A Little Background – What Android Isn't – Android: An Open Platform for Mobile Development – Native Android Applications – Android SDK Features – Introducing the Open Handset Alliance – What Does Android Run On – Why Develop for Mobile? – Why Develop for Android?– Introducing the DevelopmentFramework.
GETTING STARTED:Developing for Android – Developing for Mobile and Embedded Devices – Android Development Tools.
UNITII
CREATING APPLICATIONS AND ACTIVITIES :What Makes an Android
Application?– Introducing the Application Manifest File – Using the Manifest Editor – Externalizing Resources – The Android Application Lifecycle – Understanding an Application's Priority and Its Process' States – Introducing the Android Application Class   – A Closer Look at AndroidActivities.
BUILDING USER INTERFACES :Fundamental Android UI Design – Android User Interface Fundamentals – Introducing Layouts – To – Do List Example – Introducing Fragments – The Android Widget Toolbox – Creating New Views – IntroducingAdapters.

UNIT III
INTENTS AND BROADCAST RECEIVERS:Creating Intent Filters and BroadcastReceivers.
FILES, SAVING STATE, AND PREFERENCES :Saving Simple Application Data – Creating and Saving Shared Preferences – Retrieving Shared Preferences – Creating a Settings
Activity for the Earthquake Viewer – Introducing the Preference Framework and the Preference Activity– Persisting the Application Instance state.

UNIT IV
DATABASES AND CONTENT PROVIDERS :Introducing Android Databases   – Content Values and Cursors – Working with SQLite Databases – Creating Content Providers – Using Content Providers – Adding Search to Your Application.

WORKING IN THE BACKGROUND: IntroducingServices – Using BackgroundThreads – Using Alarms.

UNIT V

MAPS, GEOCODING, AND LOCATION– BASED SERVICES : Using Location–BasedServices – BasedServices – Selecting a Location Provider– Finding YourCurrentLocation – Best Practice for LocationUpdates– UsingProximityAlerts – Using the Geocoder – Creating Map – BasedActivities.

MONETIZING,PROMOTING AND DISTRIBUTING APPLICATIONS : Signingand PublishingApplications – DistributingApplications – An Introduction to Monetizing your applications.

TEXT BOOK

1. Reto Meier, **"Professional Android 4 Development"**, John Wiley and Sons, 2012

UNITI	**:**	Chapters1,2
UNITII	**:**	Chapters3,4
UNITIII	**:**	Chapters5,7
UNITIV	**:**	Chapters8,9
UNITV	**:**	Chapters 13,19

BOOKS FOR REFERENCE

1. W. Frank Ableson, RobiSen, Chris King, C. Enrique Ortiz **,"Android in Action"**, Third Edition, ,2012
2. Wei – Meng Lee, **"Android Application DevelopmentCookbook"**, John Wiley and Sons, 2013
3. Grant Allen, **"Beginning Android 4"**, Apress,20
4. Shane Conder, Lauren Darcey, **"Android Wireless Application Development"**, Addision–Wesley,2011
5. Reto Meier,**"Professional Android Development"**, John Wiley and Sons,2009

Hours/Week:5   **Code:U11CA5NMP01**
Credits :2   **Marks:100**

PHOTOSHOP

1.   Creating a NewDocument.

2.   Working with Tools inPhotoshop.

3.   Working with Layers andHistory.

4.   Designing a GreetingCard.

5.   Designing anInvitation.

6.   Designing aWallpaper.

7.   Designing aLogo.

8.   Designing a BusinessCard.

COREL DRAW

9.   Creatinganewdocumentfile,openingadocumentfile,savingandclosing
      documents.

10. Working with tools in Coreldraw.

•   Creating rectangles, squares, circles andellipses.

•   Drawing polygons, spirals, Graph paper grids and creatingStars.

•   Rotatingshapes.

•   Selectingobjects

•   Working with fill and outlinecolors.

•   Workingwithobjects,duplicatingobjects,lockingandunlocking
      objects.

•   Aligning objects, finding and replacingobjects.

•   Combing objects andintersecting

11. Working with Curves and Text in Coreldraw

- Workingwithcurves, drawingwithfreehandtoolanddrawingclosedcurves and auto close curvedobjects.
- Working with nodes andsegments.
- Drawing with Bezier tool, drawing with the Artistic Mediatool.
- Working with objects sprayer, calligraphicmode.
- Working with Pen tool, Polyline tool, 3 point curve tool and dimensiontool.
- Working withArtistic
- Creating paragraph text, line text, Formatting text, Moving and Rotatingtext.
- Fill color to thetext.
- Spacing, word spacing , working withlines.
- Fitting text topath.

12. Working withColors

- Working withfills.
- Working with uniformfills.
- Working with fountainfill.
- Working with patternfill.
- Working with texturefill.
- Working with postscript texture.

PAGEMAKER

13. Designing a Page using PageMaker.

B.C.A. : SEMESTER V
(For Candidates admitted from June2014Onwards)
SBE 4 – QUANTITATIVE APTITUDE

Hours/Week : 2	**Code: U14CA5SBT04**
Credits : 2	**Mark: 100**

OBJECTIVE:
To impart the basic knowledge on English, Mathematics, Verbal and Non-Verbal reasoning.

UNIT –I

Vocabulary: PrefixesandSuffixes-JumbledWordsandSentences–JumbledWords–Jumbled Sentence.

Grammar and Usage : The Sentence – Active and Passive voice – Tenses an overview – Reported Speech / Indirect Speech – Errors in use of Articles.

UNIT - II

Arithmetic Ability : Numbers – H.C.F and L.C.M of Numbers – Problems on Numbers – Problems on Ages – Profit and Loss – Simple Interest.

UNIT – III

Verbal Reasoning : Coding – Decoding Test – Series Test – Inserting the Missing Character.

UNIT – IV

Non-Verbal Reasoning : Series – Analogy – Similar Figure Test.

UNIT V

Brain Twisters : Date, Calendar and Clock - Puzzle Test.

TEXT BOOKS
1. J.K.Gangal,"CompetitiveEnglishforProfessionalCourses",
S.Chand&CompanyLtd.,New Delhi.2010.
        UNITI   :   Vocabulary   :   Units 5,8
                              Grammar&usage   :   Units 2,5,6,7

2. Dr.R.S.Aggarwal,"Quantitative
        Aptitude",S.Chand&CompanyLtd.,NewDelhi.2011. UNITII   :
                        Chapters 1,2,7,8,11,21

3. Dr.Lal, Mishra & Kumar, "Multi- dimensional Reasoning (Verbal & Non-Verbal)", Upkar Prakashan Private Company Ltd., NewDelhi.
        UNITIII   :   VerbalReasoning   :   Chapters 2,10,20
        UNITIV   :   Non-Verbal Reasoning :   Chapters 1,2,15
        UNITV   :   VerbalReasoning   :   Chapters 7,22

HOLY CROSS COLLEGE(AUTONOMOUS), TIRUCHIRAPPALLI-2

B.A. /B.Sc. / B.Com. / B.R.Sc./ B.C.A. DEGREE COURSE

LIFE ORIENTED EDUCATION

ETHICS – III: FAMILY AND CAREER DEVELOPMENT

HRS / Wk: 1   **CODE:U13VE6LVE03**

                                                                             CREDIT : 1

                                                                             MARKS : 100

OBJECTIVES:

- To help the students learn skills, knowledge, talent to lead a meaningfullife.
- To help the students understand marriagelife.
- To make the students learn skills of nurturing family andchildren.
- To make them aware of emotional intelligence and choose theircarrier.

UNIT – I: PERSONAL COMPETENCE

Emotional Intelligence for Professional growth, Management Vs Leadership-Management and Leadership Skills - Conflict Management - Tips for Professional growth

UNIT - II: MARRIAGE AND FAMILY

Family Vision - Family Values, Family relationship, Family Management, Sex in Marriage, Emotional Balance and Imbalance, Compatibility between Husband and Wife

UNIT – III: MOTHERHOOD

Bringing up Children - Development stages (Eric Ericson model), Spirituality: Spirituality in Family - Prayer, God's Will, and Role of Mother

UNIT – IV: PERSONALITY DEVELOPMENT

Self Analysis; interpersonal relation, introspection – character formation towards positive personality (values, self and college motto, punctuality, good moral, poverty, honesty, politeness, humanity, gentleness, friendship, fellowship and patriotism

UNIT – V: CAREER CHOICE

Career Choice according to Personality, Preparation for Competitive Exams, Sources of Knowledge, Memory Techniques, MindMapping

REFERENCES:

1. Tony B and Barry Buzan(2003), The mind map book, BBC world wide limited,London.
2. Susan Nash(2005), Turning team performance inside out, Jai CO. publishing House,New Delhi.
3. Fr. Ignacimuthu (1999) "Values for Life", Vaigarai Pathipagam.
4. Grose. D.N. (2000), "A text book on Value Education", DominantPublishers.

B.A/B.Sc./B.COM/B.R.Sc./B.C.A – DEGREE COURSES

LIFE ORIENTED EDUCATION

BIBLE STUDIES – III: ESSENCE OF CHRISTIAN FAITH

HRS / WK: 1   CODE:U12VE6LVB03

CREDIT:1   MARKS : 100

OBJECTIVE:

- Prepare to practice Christian principles in family, church and society as a youngwomen.

UNIT - I: ESSENTIALS OF CHRISTIAN FAITH

- Salvation – Deliverance from sin (Is 53),Assurance of salvation and New life (II Cor5:17)
- Sacraments – Baptism (Luke 3: 6-14), Lord's Supper (I Cor 10: 16,17; 11:23-29)
- Trinity – One in three and three in one. Illustrations from the Bible. (John 14:16,17)
- Heaven and Eternal life (John 14: 13, 3:13-21)

UNIT – II: MARIAGE AND FAMILY LIFE

- Finding the God's Will - Issac (Gen24)
- Man and woman as Partners – Abraham and Sarah (Gen16-18,22)

  Aquila and Priscilla (Acts 18: 1-3,26)
- Evils to be avoided – Premarital Sex, ExtramaritalSex,

  Homosexuality, Abortion(Heb 13: 4, Psalm 127 : 4)
- Ideal Wife – Sarah (I Peter 3: 1-6), Ruth, Eph5

UNIT – III: CHRISTIAN HOME

- Parental Responsibilities and bringing up children – Abraham (Gen22),

  Eli (I Sam 2: 24-36,3: 11- 18), Mary Mother of Jesus (Luke 2: 51,52
- Caring for the Aged (I Sam 2:31,32)
- Entertainments (I Cor 10:23)

UNIT – IV: CHRISTIAN ETHICS

- Holiness – Joseph (Gen 39:9)Levi 11: 45, Ecc12
- Obedience to God - Abraham (Gen 12) ; St.Paul (Acts9)
- Freedom and Accountability
- Justice andLove
- Choices in Life – Making Decisions(Studies, job, lifePartner)
- Model to follow – Who is your model? (John 15:1-17)
- Social Evils – Dowry, Caste discrimination, Accumulation ofwealth
- Freedom of Options, Time Management, Work Ethics (I Peter 2:11-25)

UNIT – V: ROLE IN CHURCH AND SOCIETY

- Man is the temple of God (I Cor 3: 11-17, 6: 19-20)

Individual responsibility in Gospelwork

- Church –Body of Christ (I Cor 12:14-27)

- Unity (John 17: 20-23, Mat 10: 37-39, 16:24-26, Mark 13:11-13)

- Discipleship (I & II Timothy,Titus)

- Social Responsibilities (Phil 2; 1-11, James 1: 27, 2: 14-17, 4: 17, 5:14-15)

REFERENCES:

1. Alban Douglass (1982) One Hundred Bible Lessons. Gospel Literature Service,Mumbai.

2. Derek Prince (1993) Foundations for Righteous Living. Derek Prince Ministries-South Pacific, New Zealand.

3. Derek Prince and Ruth Prince (1986) God is a Match maker. Derek Ministries,India.

4. Ron Rhodes(2005) Hand book on Cults.Amazon.com

5. Stanley.R. (1997) With God Again. Blessing Youth Mission,India.

6. Taylor.H. (1993) Tend My Sheep. SPCK,London.

HOLY CROSS COLLEGE (AUTONOMOUS) TIRUCHIRAPPALLI – 2
B.A./B.Sc/B.Com/B,R.SC/B.C.A - DEGREE COURSES
LIFE ORIENTED EDUCATION
CATECHISM – III: LITURGY AND CHRISTIAN LIFE

HRS / WK:1   **CODE:U12VE6LVC03**
CREDIT: 1   **MARKS: 100**

OBJECTIVES:
- To prepare the students to participate meaningfully in the liturgical celebration and experience GOD in their day todaylife.
- To become a living witness to Jesus Christ in their personal, family and sociallife.

UNIT - I: LITURGY

Personal prayer (Know oneself) – Vocal prayer – Community prayer – Meditation – Contemplation – Knowing the prayers : Our Father – Hail Mary – Holy Rosary – Mysteries of the Rosary- Litany of Mary – family prayer-Populardevotion

UNIT – II: HOLY SACRIFICE OF THE MASS

Significance – meaning and need for spiritual growth – mass prayers – part of the mass – liturgical year, its division and its significance. –Creed – Act of contrition – Discernment of spirits – Counseling – Spiritual direction.

UNIT – III: CHRISTIAN VOCATION AS DISCIPLE FOR THE KINGDOM OF GOD

Who am I as a Christian? – Christian dignity and others – The values of the Kingdom opposing to the values of the World – Christian social conscience – Christian in the reformation of the world – a call to be salt and light in today's context-Come follow me-I have chosen you-Servant hood-Baptism-Common priesthood-Discipleship-Lay vocation-Lay participation-Lay associates.

UNIT – IV: CHRISTIAN FAMILY

Holy family- characteristic of good family – role of families in the church and society-Responsibilities of parents, and children in the family – church – laws towards marriage-Prolife (Abortion, Euthanasia).

UNIT – V: CONSECRATED LIFE

"Come and follow me" – special disciples - "I have called you to be mine"- - called to be prophets and agents for God's Kingdom – nucleus of the church – Eschatological signs of the God's Kingdom.

REFERENCES:

1. Compendium – Catechism for the Catholic Church Published by Vaigarai Publishing House for the Catholic Church ofIndia.

2. You are the light of the World, A course on Christian living for II year Religion published by Department of Foundation Courses, St.Joseph's College (Autonomous), Tiruchirappalli– 620 002.

Hours/Week:6   Code:U14CA6MCT11
Credits   :5   Marks:100

OBJECTIVE
            To give deeper understanding of operating system as a resource manager.

UNIT I

INTRODUCTION: What is an Operating System? – Mainframe Systems – Desktop Systems – Multiprocessor Systems – Distributed Systems – Clustered Systems - Real-Time Systems – Handheld Systems – Feature Migration – Computing Environments.
COMPUTER-SYSTEM STRUCTURES: Computer-System Operation – I/O Structure – Storage Structure – Storage Hierarchy – Hardware Protection –Network Structure.
OPERATING-SYSTEM STRUCTURES: System Components – Operating-System Services – System Calls – System Programs – System Structure – Virtual Machines.

UNIT II

PROCESSES: Process Concept – Process Scheduling – Operation on Processes – Cooperating Processes – Interprocess Communication. **THREADS:** Overview – Multithreading Models - Threading Issues. **CPU SCHEDULING:** Basic Concepts – Scheduling Criteria – Scheduling Algorithms – Multiple–Processor Scheduling – Real-Time Scheduling – AlgorithmEvaluation.

UNIT III

PROCESS SYNCHRONIZATION: Background - The Critical-Section Problem – Synchronization Hardware – Semaphores – Classic Problems of Synchronization.
DEADLOCKS: System Model – Deadlock Characterization – Methods for Handling Deadlocks – Deadlock Prevention – Deadlock Avoidance – Deadlock Detection – Recovery from Deadlock.

UNIT IV

MEMORY MANAGEMENT: Background – Swapping – Contiguous Memory Allocation – Paging - Segmentation – Segmentation with Paging.
VIRTUAL MEMORY: Background - Demand Paging – Process Creation - Page Replacement – Allocation of Frames – Thrashing – Other Considerations.

UNIT V

FILE-SYSTEM INTERFACE: File Concept – Access Methods – Directory Structure – File System Mounting – File Sharing – Protection.
FILE-SYSTEM IMPLEMENTATION: File-System Structure – File System Implementation - Directory Implementation – Allocation Methods – Free-Space Management –Efficiency and Performance – Recovery.

TEXT BOOK

1. Abraham Silberschatz, Peter Baer Galvin, Greg Gagne, **Operating System Concepts,** 2006, Sixth Edition, John Wiley & Sons Publications Inc., Singapore.

UNITI	:	Chapters 1, 2, 3(3.1 – 3.6)
UNITII	:	Chapters 4(4.1 – 4.5), 5(5.1 - 5.3), 6(6.1 -6.6)
UNITIII	:	Chapters 7(7.1 – 7.5), 8(8.1 –8.7)
UNITIV	:	Chapters 9(9.1 – 9.6), 10(10.1 –10.6,10.8)
UNITV	:	Chapters 11(11.1 – 11.6), 12(12.1 –12.7)

REFERENCE BOOKS

1. Deitel Harvay M., **Operating Systems**, 2003, Pearson Education Publications,Singapore.

2. Godbole AchyutS.,**OperatingSystems**,2002,TataMcGrawHillPublishingCompany Limited, NewDelhi.

3. Milan Milankovic, **Operating System-Concepts and Design**, 2005, Tata McGrawHill Publishing Company Limited, NewDelhi.

4. Tanenbaum Andrew S. & Woodhull Albert S., **Operating Systems – Design and Implementation**, 2002, Pearson Education Publications,Singapore.

5. William Stallings, **Operating Systems – Internals and Design Principles**, 2006, Pearson Education Publications,Singapore.

MAJOR CORE 12: WEB APPLICATION DEVELOPMENT TOOLS LAB

Hours/Week:6   **Code:U14CA6MCP12**
Credits   :5   **Marks:100**

HTML

1. Create a home page of your own using simple HTMLtags.
2. Develop a web page for a restaurant‟s menu card usingtables.
3. Design a web page for your college displaying various courses using lists andframes.
4. Create a form to reserve a ticket in the southernrailways.

VB SCRIPT

1. Write a program to display the weekdays.
2. VB Script Program to generate Date and Time in differentformat.
3. Program to Validate Age and Numeric Value usingVBScript.
4. Write a VBScript code to accept radius and display the area of thecircle.

JAVA SCRIPT

1. Write a script to generate random numbers within 1 to 10 and display the numbers in atable.
2. Write a script to compare two strings using stringobject.
3. Write a script to validate an HTMLform.
4. Write a script to create an arithmeticcalculator

JSP

1. Create a JSP application that validates the loginform.
2. Create an application that accepts the entries from the guestbook form and add those entriesin a database.
3. Create an application in JSP to redirect the request to any otherpage.

ASP

1. Write an ASP program to get the name and favorite ice cream flavor. Respond with the price of the corresponding icecream.
2. Create a login form, to expire, if the user does not type the password within 100seconds.
3. Create a course registration form with name, address and list of available course. Reply with the corresponding course fees on selection of a single course or a collection ofcourses.

HOLY CROSS COLLEGE (AUTONOMOUS), TIRUCHIRAPALLI – 2
B.C.A. : SEMESTER VI
(For Candidates admitted from June 2014 Onwards)
MAJOR ELECTIVE 3: SOFTWARE ENGINEERING

Hours/Week :6   **Code:U14CA6MET06**
Credits   :5   **Marks:100**

OBJECTIVE
To understand the concept of software design, maintenance, verification and validation techniques.

UNIT I

INTRODUCTION TO SOFTWARE ENGINEERING: Some definition, Some Size Factors -- Quality and Productivity Factors - Managerial Issues.
PLANNING A SOFTWARE PROJECT: Defining the Problem - Developing a Solution Strategy - Planning the Development Process: The Phased Life-Cycle Model – Milestones, Documents, and Reviews - The Cost Model - The Prototype Life-cycle Model - Planning an Organizational Structure: Project Structure Programming Team Structure.
SOFTWARE COST ESTIMATION: Software Cost Factors - Software Cost Estimation Techniques.

UNIT II

SOTWARE DESIGN: Fundamental Design Concepts – Modules And Modularization Criteria – Design Techniques – Detailed Design Considerations – Real-Time And Distributed System Design – Test Plans – Milestones, Walkthroughs AndInspections.

UNIT III

IMPLEMENTATION ISSUES: Structured Coding Techniques – Coding Style, Standards and Guidelines – Documentation Guidelines.
MODERN PROGRAMMING LANGUAGE FEATURES:
Type Checking – Separate Compilation – User Defined Data Types – Data Abstraction – Exception Handling – Concurrency Mechanisms.

UNIT IV

VERIFICATION AND VALIDATION TECHNIQUES: Quality Assurance - Walkthrough And Inspections – Static Analysis – Symbolic Execution – Unit Testing and Debugging – System Testing – Format Verification.

UNIT V

SOFTWARE MAINTENANCE: Enhancing Maintainability during Development – Managerial Aspects of Software Maintenance – Configuration Management – Source Code Metrics – Other Maintenance Tools and Techniques.

TEXT BOOK

1. Fairley Richard E., **Software Engineering Concepts**, 2002, Tata McGraw - Hill Publishing
        Company Limited, NewDelhi.

UNITI	:	Chapter1,2,3
UNITII	:	Chapter5
UNITIII	:	Chapter6,7
UNITIV	:	Chapter8
UNITV	:	Chapter9

REFERENCEBOOKS

1. Ali Behfrooz and Frederick J. Hudson, **Software Engineering Fundamentals**, 2003, Oxford University Press, NewYork.

2. Carlo Ghezzi, MehdiJazayeri, Dino Mandride, **Fundamentals of Software Engineering**, 2002, Prentice Hall of India , NewDelhi.

3. Ian Sommerville , **Software Engineering**, 2004, Pearson Education,Singapore.

4. Jawadekar Waman S., **Software Engineering - Principles and Practice**, 2004, Tata McGraw Hill Publishing Companies, NewDelhi.

5. Pressman Roger S., **Software Engineering - A Practioner's Approach**, 2001, Tata McGraw Hill International Edition, NewDelhi.

DATA MINING AND WAREHOUSING

Hours/Week:6   Code:U14CA6MET06
Credits   :5   Marks:100

OBJECTIVE
To provide an understanding of the Data Warehousing and Data Mining Concepts.
To understand the concepts of Correlation analysis, Data Mining methods, clustering and Association rules.

UNIT I
INTRODUCTION: Data Mining – Motivation and Importance **- Kind of Data**: Data Warehouses – Transactional Databases - Advanced Data and Information Systems and Advanced Applications - **Data Mining Functionalities – Kind of Patterns:** Concepts/Class Description: Characterization and Discrimination - Mining Frequent Patterns, Associations, Correlations - Classification and Prediction - Cluster Analysis - Outlier Analysis – Evolution Analysis. Classification of Data mining systems – Data mining task primitives – Major issues of Data mining
DATA PREPROCESSING:Descriptive Data Summarization: Measuring the Central Tendency-Measuring the Dispersion of Data-Graphic Displays of Basic Descriptive Data Summarizes - **Data Cleaning:** Missing Values-Noisy Data-Data Cleaning as a Process - **Data Integration And Transformation:** Data Integration-Data Transformation - **Data Reduction:** Data Cube Aggregation-Attribute Subset Selection-Dimensionality Reduction- Numerosity Reduction.

UNIT-II
DATA WAREHOUSE AND OLAP TECHNOLOGY: AN OVERVIEW:
Data Warehouse – Differences between Operational Databases and Data Warehouses- **A Multidimensional Data Model:** From Tables and Spreadsheets to Data Cubes-Star, Snowflakes, and Fact Constellations: Examples for Defining Star, Snowflake, and Fact Constellation Schemas - Measures: Their Categorization and Computation- Concept Hierarchies-OLAP Operations In The Multidimensional Data Model-A Starnet Query Model For Querying-Multidimensional Databases - **Data Warehouse Architecture:** Steps for the design and construction of data warehouses - A Three-Tier Data warehouse architecture - Data warehouse back-end tools and utilities-Metadata repository - types of OLAP Servers: ROLAP versus MOLAP versus HOLAP.

UNIT –III
MINING FREQUENT PATTERNS, ASSOCIATIONS, AND CORRELATIONS
Efficient and Scalable Frequent Item set Mining Methods: Finding Frequent Item sets Using Candidate Generation - Generating Association Rules from Frequent Itemsets. **Mining Various Kinds Of Association Rules**: Mining Multilevel Association Rules- Mining Multidimensional Association Rules from Relational Databases and Data Warehouses - **Classification And Prediction: Classification By Decision Tree Induction:** Decision Tree Induction-Attribute Selection Measures-Tree Pruning-Scalability and Decision Tree Induction - **Rule-Based Classification:** Using If-Then Rules for Classification-Rule Extraction from a

Decision Tree-Rule Induction Using a Sequential Covering Algorithm - **Classification By Backpropagation:** A Multilayer Feed – Forward Neural Network-Defining a Network Topology-Back propagation -Inside The Black Box : Backpropagation andInterpretability.

UNIT-IV
CLUSTER ANALYSIS:
Cluster Analysis - Types of Data in Cluster Analysis - Binary Variables- Categorical, Ordinal, and Ratio-Scaled Variables-Variables of Mixed Types-Vector Objects - **A Categorization of Major Clustering Methods: Partitioning Methods:** Classical Partitioning Methods: k-Means and k- Mediods -Partitioning Methods in Large Databases: From k-Mediods To CLARANS. **Hierarchical Methods:** Agglomerative and Divisive Hierarchical Clustering - BIRCH: Balanced Iterative Reducing and Clustering Using Hierarchies-ROCK: A Hierarchical Clustering Algorithm for Categorical Attributes – Chameleon: A Hierarchical Clustering Algorithm Using Dynamic Modeling. **Grid-Based Methods:** STING: Statistical Information Grid - Wavecluster: Clustering using Wavelet Transformation.

UNIT-V
MINING OBJECT, SPATIAL, MULTIMEDIA, TEXT AND WEB DATA
Spatial Data Mining: Spatial data cube construction and spatial OLAP –**Multimedia Data Mining:** Similarity Search in Multimedia Data - Multidimensional Analysis of Multimedia Data-Classification and Prediction Analysis of Multimedia Data - Mining Associations in Multimedia Data - Audio and Video Data Mining - **Text Mining:** Text Data Analysis and Information Retrieval- Dimensionality Reduction for Text - Text Mining Approaches
APPLICATIONS AND TRENDS IN DATA MINING
Data Mining Applications: Data Mining for Financial Data Analysis - Data Mining for the Telecommunication Industry -Data Mining for Biological Data Analysis – Data Mining in Other Scientific Applications-Data Mining for Intrusion Detection - **Social Impacts of Data Mining:** Ubiquitous and Invisible Data Mining-Data Mining, Privacy and Data Security - **Trends in Data Mining.**
TEXT BOOK
1.   JiaweiHanand MichelineKamber,‒DataMiningConcepts andTechniques‖,2ⁿᵈEdition Morgan Kaufmann,2006.
UNIT-1:   Chapter 1 (1.1, 1.2, 1.3, 1.4, 1.6, 1.7,1.9)
Chapter 2 (2.1, 2.2, 2.3, 2.4, 2.5)
UNIT-II: Chapter 3 (3.1(3.1.1), 3.2,3.3)
UNIT-III: Chapter 5 (5.2(5.2.1, 5.2.2),5.3)
Chapter 6 (6.1, 6.3, 6.5, 6.6)
UNIT– IV: Chapter 7 (7.1, 7.2, 7.3, 7.4, 7.5,7.7)
UNIT-V: Chapter 10 (10.2, 10.3,10.4)
Chapter 11(11.1, 11.4, 11.5)
BOOKS FOR REFERENCE:
1.   MargaretH.Dunham,‒DataMining:IntroductoryandAdvancedTopics‖,2003,pearson Education.
2.   ArunK.Pujari,‒DataMiningTechniques‖,2001,UniversityPress.
3.   AlexBerson,StephenJ.Smith,―DataWarehousing,DatanMining,&OLAP‖,2004,Tata McGraw-Hill.
4.   BerryJ.A.Michael,DataMiningTechniques,2004,GordonS.Linoff,2ⁿᵈEdition,Wiley Dreamtech India Pvt,Ltd.
5.   Sam Anahory, Dennis Murray, Data Warehousing in the Real World‖, 2006, Pearson Education, FirstEdition.

PHP SCRIPTING LANGUAGE

Hours/Week :6	Code:U14CA6MET06
Credits :5	Marks:100

OBJECTIVE

To learn creating dynamic web pages using the scripting language PHP, PYTHON, PERL and the database MySQL, with the LINUX operating system and the APACHE web server.

UNIT I LINUX: INTRODUCTION: LINUX File System -Login and Logout.
LINUXCOMMANDS: Command   Format -Directory Oriented Commands-WildCard Characters- File Oriented Commands – File Access Permissions – Process Oriented Commands- Background processing-Communication Oriented Commands- General PurposeCommands.
.
UNIT II
PHP & HTML: GETTING STARTED : Writing PHP-The semicolon-Delivering Text As Output-White Space-Running the PHP Script-My First PHP. **THE BASICS OF PHP:** DATA TYPES – VARIABLES – CONSTANTS - HERE DOCUMENTS – OPERATORS - ARRAYS. CONDITIONAL STATEMENTS - ITERATIONS**.**

UNIT III
FUNCTIONS: USER DEFINED FUNCTIONS-BUILT IN FUNCTIONS-PHP SERVER VARIABLES-WORKING WITH DATE AND TIME-PERFORMING WITH MATHEMATICAL OPERATIONS-WORKING WITH STRING FUNCTIONS. **WORKING WITH DATABASE [MySQL] : GETTING STARTED :**Creating MySQL DB Table –
Connecting to the MySQL Db Engine : Selecting the Database – Executing Commands : Inserting Data – Extracting Data – Updating Data – Deleting Data – Closing the Database Connection.

UNIT IV
PYTHON:GETTINGSTARTED: ProgramOutput,theprintStatementand‖HelloWorld!‖
– Program Input and the raw_input() Built-in Function – Comments – Operators – Variables and Assignment – Numbers – Strings – Lists and Tuples – Dictionaries – Code Blocks Use Indentation – if Statement – while Loop – for Loop and the range() Built-in function –Functions – Errors and Exceptions – Functions – Classes – Modules – Useful Functions – **PYTHON BASICS** : Statements and Syntax – Variable Assignment – Identifiers – Basic Style Guidelines – Memory Management – First Python Programs – Related Modules/Developer Tools – **CONDITIONALS ANDLOOPS** – if Statement – else Statement – elif Statement – Conditional Expressions – while Statement – for Statement – break Statement – continue Statement – pass Statement – else Statement - Two – Iterators and the iter() Function – List Comprehensions – Generator Expressions – RelatedModules.

UNIT V
PERL : PERL OVERVIEW: Perl Components - **PERL PARSING RULES**: The Execution Process - Syntax and Parsing Rules - Perl Coding Styles - **VARIABLES AND DATA:** Scalar Variables - Literals - Arrays - Hashes - Lists - Typeglobs - The defined Function and the Undefined Value - Default Values - Other Tokens - Special Variables - **STATEMENTS AND CONTROL STRUCTURES:** Code Blocks - Conditional Statements - Loops - **SUBROUTINES, PACKAGES, AND MODULES:** Functions - Packages - Special Blocks - Scope - Autoloading.

TEXT BOOKS

1. . B.Mohamed Ibrahim, **Linux a practical Approach**, 2005, First Edition**,** Imprint of Lakshmi Publications, NewDelhi.

   UNIT I: Chapters 1(1.6-1.10), 2.

2. James LeeBrent Ware, **Open Source Web Development with LAMP Using Linux, Apache, MySQL, Perl and PHP**, 2006, Prentice Hall of India Private Limited, NewDelhi**.**

   UNIT II, III: Chapters 7, 11.

3. Wesley J. Chun, **Core Python Programming** , 2007, Second Edition, Pearson Education,Inc. NewDelhi.

   UNIT IV: Chapters 2,3,8.

4. Martin C. Brown, **Perl: The Complete Reference,** 2009, Second Edition, Tata McGraw-Hill Publishing Company Limited, NewDelhi.
   UNIT V: Chapters 2 - 6

REFERENCE BOOKS

1. Jeremy Allen and Charles Hornberger, **Mastering PHP 4.1**, 2002, BPB Publications, New Delhi.

2. Meloni Julie C, **SAMS Teach Yourself PHP**, **MySQL and Apache**, 2006, Dorling Kindersely (India) Pvt. Ltd., NewDelhi.

3. Mercer Dave W., Allan Kent, Steven D. Nowicki, David Mercer, Dan Squier & Wankyu Choi, **Beginning PHP5**, 2004, Wiley Publishing Inc., NewDelhi.

4. Richard Petersen, **The Complete Reference Linux**, 2004, Tata McGraw-Hill Publishing Company Ltd., NewDelhi.

5. Robert Sheldon and Geoff Moes, Beginning MySQL, 2005, Wiley Publishing Inc., New Delhi.

Hours/Week:2   **Code: U13CA6NMP02 /U13CS5NMP01**
Credits   :2   **Marks:100**

Using various selection tools.

1. Using image adjustment tools to enhance animage.

2. Create scenery using Photoshopbrushes.

3. Demonstrate the use of layereffects.

4. Create a text with pictureinside.

5. Demonstrate the use of ripple effect and lensflare.

6. Create a snapshot inside aphoto.

7. Photoretouching.

8. Coloring a BWphoto.

9. Create slide mounttemplate.

10. Create Photo mounttemplate.

11. Create photo frameeffect.

12. Create photo filmeffect.

13. Create a 3D Photoeffect.

14. Create 2D and 3Dlogos.

15. Animate text using ImageReady.

16. CreatethreeframeswithLensflareeffectanddifferentbackgroundcolorsandanimateusing Image
    Ready.

17. Create a Christmas Tree with BlinkingLights.

18. Animate a candle flame using Liquifyfilter.

19. Design an attractive Greeting Card, Invitation,Wallpaper.

Hours/Week:2   **Code: U13CA6SBP05 /U13CS6SBP05**
Credits   : 2   **Marks:100**

MS Word

1 CreatingDocuments

2 Working withDocuments
    a. Opening Files – New &Existing
    b. SavingFiles
    c. Formatting page and SettingMargins
    d. Converting files to differentformats
        i. Importing
        ii. Exporting
        iii. Sending files toothers
    e. Editing textdocuments
        i. Inserting
        ii. Deleting
        iii. Cut, Copy,paste
        iv. Undo,Redo
        v. Find, Search,Replace
    f. Using Tool bars,Ruler
        i. UsingIcons
    g. Usinghelp

3 FormattingDocuments
    a. Setting FontStyles
        i. Font selection – style, size, coloretc.
        ii. Type face – Bold Italic,underline
        iii. Casesettings
        iv. Highlighting
        v. Specialsymbols
    b. Setting Paragraphstyle
        i. Alignments
        ii. Indents
        iii. Linespace
        iv. Margins
        v. Bullets andNumbering
    c. Setting PageStyle
        i. Formatting
        ii. Border &Shading
        iii. Columns
        iv. Header &footer
        v. SettingFootnotes
        vi. Inserting manual Page break, Column break and linebreak.
        vii. Creating sections andframes
        viii. Inserting Clip arts, pictures, and otherfiles
        ix. Anchoring &Wrapping

d. Setting DocumentStyles
   i. Table ofContents
   ii. Index
   iii. Page Numbering, data &Time, Authoretc.
   iv. Creating MasterDocuments
   v. Webpage

4 CreatingTables
a. Tablesettings
b. Borders
c. Alignments
d. Insertion,deletion
e. Merging
f. Splitting
g. Sorting
h. Formula

5 Drawing
a. Inserting Pictures/Filesetc.
b. DrawingPictures
c. Formatting &Editingpictures
d. Grouping andordering
e. Rotating

6 Tools
a. WordCompletion
b. SpellChecks
c. Macros
d. Mailmerge
e. Templates
f. UsingWizards
g. TrackingChanges
h. Security

7 PrintingDocuments
a. PrintingDocuments

MS Excel

1 Creatingworksheet

2 Working withSpreadsheets
a. Opening aFile
b. SavingFiles
c. SettingMargins
d. Converting files to differentformats
   i. Importing, Exporting and Sending files toothers

e. Spreadsheetaddressing
   i. Rows, Columns &Cells,
   ii. Referring cells and Selectingcells
f. Entering and EditingData
   i. EnteringData
   ii. Cut, Copy, paste, Undo, Redo, Find, Search &Replace
   iii. Filling continuous rows,columns
   iv. Inserting - Data, cells, column, rows &sheets
   v. Manualbreaks
g. Computingdata
   i. SettingFormula
   ii. Finding total in a column orrow
   iii. Mathematicaloperations(Addition,Subtraction,Multiplication, Division,Exponentiation)
   iv. Using otherFormulas

3 FormattingSpreadsheets
a. Formatting – Cell, row, column &Sheet
   i. Alignment, Font, Border&shading
   ii. Highlightingvalues
   iii. Hiding/LockingCells
b. Worksheet
   i. SheetName
   ii. Row & ColumnHeaders
   iii. Row Height, ColumnWidth
   iv. Visibility – Row, Column,Sheet
   v. Security
c. Formatting –worksheet
   i. Sheet Formatting & style - background, color , Borders &shading
d. Anchoringobjects
e. Formatting layout for Graphics, Clipartetc.

4 Working withsheets
a. Sorting
b. Filtering
c. Validation
d. Consolidation
e. Subtotal

5 CreatingCharts
a. Selectingcharts
b. Formatting charts, label, scalingetc.

6 UsingTools
a. ErrorChecking
b. SpellChecks
c. Macros
d. FormulaAuditing
e. Creating & usingTemplates
f. TrackingChanges
g. Customization

MS Power Point

1 Creating apresentation
a. Setting presentationstyle
b. Adding Text to thepresentation

2 Formatting apresentation
a. Addingstyle
b. Color, gradientfills
c. Arrangingobjects
d. Adding Header &Footer
e. SlideBackground
f. Slidelayout

3 Adding Graphics to thepresentation
a. Inserting pictures, movies, tables, etc into thepresentation
b. Drawing Pictures usingDraw

4 Adding effects to thepresentation
a. Setting Animation & transitioneffect
b. Adding audio andvideo

5 PrintingHandouts

6 Generating standalone presentationviewer

MS Access

1 Introduction
a. Databaseconcepts
b. Tables
c. Queries
d. Forms
e. Reports

2 Opening & Saving databasefiles
a. CreatingTables
b. TableDesign
c. Indexing
d. Enteringdata
e. Importingdata

3 CreatingQueries
a. SQLstatements
b. Settingrelationship
c. Usingwizards

4 CreatingForms
a. GUI
b. Form

5 Creating & printingreports

III B.C.A/B.A/B.Sc/B.Com/BBA/B.R.Sc
SKILL BASED ELECTIVE 6: RESEARCH METHODOLOGY

Hours/Week : 2   **Code:U13DS6SBT06**
Credits   : 2   **Marks:100**

Course objectives:
   To help the students develop research skills
   To expose the students to the concept of research and to implement a research project.

Unit 1: Introduction to Research
        Definition, type, nature and scope of research – Research design

Unit 2: Data Collection
        Types-Primary and secondary data-Data processing-Hypothesis testing

Unit 3: Plan and Execution
        Methodology –Plan and execution-Analysis –Documentation

Unit 4: Format and Presentation of Project Report
        Art of writing and Structure of a Project Report-Viva-Voce

Unit 5: Project
        Project work

Books for reference:
   1. Kothari C.R., Research Methodology. New Delhi: New Age International
      (P)Ltd Publishers,   2009.Reprint
   2. Rahim F.A Thesis Writing: A manual for researchers. New Delhi:
       NewAge International Publishers, 1998.Print.
   3. Gopalana. Thesis Writing. Chennai: Vijay Nicole,
      2005.Print.Oliver,Paul, Writing Your Thesis. New Delhi: Sage
      Publication, 2008.Print.

HOLY CROSS COLLEGE(AUTONOMOUS), TIRUCHIRAPPALLI-2
B.A. /B.Sc. / B.Com. / B.R.Sc./ B.C.A. DEGREE COURSE
LIFE ORIENTED EDUCATION
ETHICS – III: FAMILY AND CAREER DEVELOPMENT

HRS / Wk: 1   **CODE:U13VE6LVE03**

CREDIT : 1

MARKS : 100

OBJECTIVES:

- To help the students learn skills, knowledge, talent to lead a meaningfullife.
- To help the students understand marriagelife.
- To make the students learn skills of nurturing family andchildren.
- To make them aware of emotional intelligence and choose theircarrier.

UNIT – I: PERSONAL COMPETENCE

Emotional Intelligence for Professional growth, Management Vs Leadership-Management and Leadership Skills - Conflict Management - Tips for Professional growth

UNIT - II: MARRIAGE AND FAMILY

Family Vision - Family Values, Family relationship, Family Management, Sex in Marriage, Emotional Balance and Imbalance, Compatibility between Husband and Wife

UNIT – III: MOTHERHOOD

Bringing up Children - Development stages (Eric Ericson model), Spirituality: Spirituality in Family - Prayer, God's Will, and Role of Mother

UNIT – IV: PERSONALITY DEVELOPMENT

Self Analysis; interpersonal relation, introspection – character formation towards positive personality (values, self and college motto, punctuality, good moral, poverty, honesty, politeness, humanity, gentleness, friendship, fellowship and patriotism

UNIT – V: CAREER CHOICE

Career Choice according to Personality, Preparation for Competitive Exams, Sources of Knowledge, Memory Techniques, MindMapping

REFERENCES:

5. Tony B and Barry Buzan(2003), The mind map book, BBC world wide limited,London.
6. Susan Nash(2005), Turning team performance inside out, Jai CO. publishing House,New Delhi.
7. Fr. Ignacimuthu (1999) "Values for Life", Vaigarai Pathipagam.
8. Grose. D.N. (2000), "A text book on Value Education", DominantPublishers.

HOLY CROSS COLLEGE (AUTONOMOUS), TRICHIRAPALLI - 2.
B.A/B.Sc./B.COM/B.R.Sc./B.C.A – DEGREE COURSES
LIFE ORIENTED EDUCATION
BIBLE STUDIES – III: ESSENCE OF CHRISTIAN FAITH

HRS / WK: 1   **CODE:U12VE6LVBO3**

CREDIT:1   **MARKS : 100**

OBJECTIVE:

- Prepare to practice Christian principles in family, church and society as a youngwomen.

UNIT - I: ESSENTIALS OF CHRISTIAN FAITH

- Salvation   – Deliverance from sin (Is 53),Assurance of salvation and New life (II Cor5:17)

- Sacraments – Baptism (Luke 3: 6-14), Lord's Supper (I Cor 10: 16,17; 11:23-29)

- Trinity   – One in three and three in one. Illustrations from the Bible. (John 14:16,17)

- Heaven and Eternal life (John 14: 13, 3:13-21)

UNIT – II: MARIAGE AND FAMILY LIFE

- Finding the God's Will - Issac (Gen24)

- Man and woman as Partners – Abraham and Sarah (Gen16-18,22)

                        Aquila and Priscilla (Acts 18: 1-3,26)

- Evils to be avoided – Premarital Sex, ExtramaritalSex,

                Homosexuality, Abortion(Heb 13: 4, Psalm 127 : 4)

- Ideal Wife – Sarah (I Peter 3: 1-6), Ruth, Eph5

UNIT – III: CHRISTIAN HOME

- Parental Responsibilities and bringing up children – Abraham (Gen22),

        Eli (I Sam 2: 24-36,3: 11- 18), Mary Mother of Jesus (Luke 2: 51,52

- Caring for the Aged (I Sam 2:31,32)

- Entertainments (I Cor 10:23)

UNIT – IV: CHRISTIAN ETHICS

- Holiness – Joseph (Gen 39:9)Levi 11: 45, Ecc12

- Obedience to God - Abraham (Gen 12) ; St.Paul (Acts9)

- Freedom and Accountability

- Justice andLove

- Choices in Life – Making Decisions(Studies, job, lifePartner)

- Model to follow – Who is your model? (John 15:1-17)

- Social Evils – Dowry, Caste discrimination, Accumulation ofwealth

- Freedom of Options, Time Management, Work Ethics (I Peter 2:11-25)

UNIT – V: ROLE IN CHURCH AND SOCIETY

- Man is the temple of God (I Cor 3: 11-17, 6: 19-20)
  Individual responsibility in Gospelwork

- Church –Body of Christ (I Cor 12:14-27)

- Unity (John 17: 20-23, Mat 10: 37-39, 16:24-26, Mark 13:11-13)

- Discipleship (I & II Timothy,Titus)

- Social Responsibilities (Phil 2; 1-11, James 1: 27, 2: 14-17, 4: 17, 5:14-15)

REFERENCES:

1. Alban Douglass (1982) One Hundred Bible Lessons. Gospel Literature Service,Mumbai.

2. Derek Prince (1993) Foundations for Righteous Living. Derek Prince Ministries-South Pacific, New Zealand.

3. Derek Prince and Ruth Prince (1986) God is a Match maker. Derek Ministries,India.

4. Ron Rhodes(2005) Hand book on Cults.Amazon.com

5. Stanley.R. (1997) With God Again. Blessing Youth Mission,India.

6. Taylor.H. (1993) Tend My Sheep. SPCK,London.

HOLY CROSS COLLEGE (AUTONOMOUS) TIRUCHIRAPPALLI – 2
B.A./B.Sc/B.Com/B,R.SC/B.C.A - DEGREE COURSES
LIFE ORIENTED EDUCATION
CATECHISM – III: LITURGY AND CHRISTIAN LIFE

HRS / WK:1

CODE:U12VE6LVC03
CREDIT: 1
MARKS: 100

OBJECTIVES:
- To prepare the students to participate meaningfully in the liturgical celebration and experience GOD in their day todaylife.
- To become a living witness to Jesus Christ in their personal, family and sociallife.

UNIT - I: LITURGY

Personal prayer (Know oneself) – Vocal prayer – Community prayer – Meditation – Contemplation – Knowing the prayers : Our Father – Hail Mary – Holy Rosary – Mysteries of the Rosary- Litany of Mary – family prayer-Populardevotion

UNIT – II: HOLY SACRIFICE OF THE MASS

Significance – meaning and need for spiritual growth – mass prayers – part of the mass – liturgical year, its division and its significance. –Creed – Act of contrition – Discernment of spirits – Counseling – Spiritual direction.

UNIT – III: CHRISTIAN VOCATION AS DISCIPLE FOR THE KINGDOM OF GOD

Who am I as a Christian? – Christian dignity and others – The values of the Kingdom opposing to the values of the World – Christian social conscience – Christian in the reformation of the world – a call to be salt and light in today's context-Come follow me-I have chosen you-Servant hood-Baptism-Common priesthood-Discipleship-Lay vocation-Lay participation-Lay associates.

UNIT – IV: CHRISTIAN FAMILY

Holy family- characteristic of good family – role of families in the church and society-Responsibilities of parents, and children in the family – church – laws towards marriage-Prolife (Abortion, Euthanasia).

UNIT – V: CONSECRATED LIFE

"Come and follow me" – special disciples - "I have called you to be mine"- - called to be prophets and agents for God's Kingdom – nucleus of the church – Eschatological signs of the God's Kingdom.

REFERENCES:

1. Compendium – Catechism for the Catholic Church Published by Vaigarai Publishing House for the Catholic Church ofIndia.

2. You are the light of the World, A course on Christian living for II year Religion published by Department of Foundation Courses, St.Joseph's College (Autonomous), Tiruchirappalli– 620 002.