

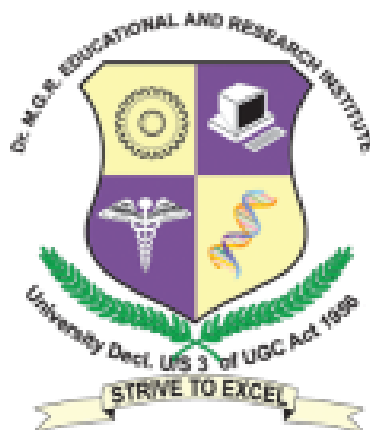


Dr. M.G.R.
Educational and Research Institute
University

(Declared as Deemed to be university u/s.3 of UGC Act 1956)

Maduravoyal, Chennai - 95

(An ISO 9001 : 2008 Certified Institution)



B.Sc. (Information Science and Cyber Forensics)

Curriculum and Syllabus

Regulation – 2017

B.Sc. (Information Science and Cyber Forensics) Regulation 2017 JUNE



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B.Sc. (ISCF) Curriculum

Semester - I – Theory						
Sub. Code	Subject Name	L	T	P	C	Page No.
HBTAH001 / HBHI17001 / HBFR17001	Tamil - I / Hindi - I / French - I	3	0	0	3	
HBEN17001	English - I	3	0	0	3	
HBMA15A01	Allied Mathematics - I	3	1	0	4	
HBCS17C01	Fundamentals of Computer and Internet	3	1	0	4	
HBCS17C02	Fundamentals of Programming	3	1	0	4	
Practical						
HBCS17L01	Fundamentals of Programming Lab	0	0	6	2	
1st Semester Credits						20

Semester - II - Theory						
Sub. Code	Subject Name	L	T	P	C	Page No.
HBTA17002 /HBH17002/ HFR17002	Tamil - II / Hindi - II / French - II	3	0	0	3	
HBEN17002	English - II	3	0	0	3	
HBMA17A02	Allied Mathematics - II	3	1	0	4	
HBCS17C03	Object Oriented Programming	3	1	0	4	
HBCS17C04	Data Structures	3	1	0	4	
Practical						
HBCS17L02	Data Structure Lab using C++	0	0	6	2	
2nd Semester Credits						20

Semester - III - Theory						
Sub. Code	Subject Name	L	T	P	C	Page No.
HBPH14A03	Allied Electronics - I	3	1	0	4	
HBCS17C05	Programming in Java	3	1	0	4	
HBCS17C06	Operating System	3	1	0	4	
HBCF17C01	Introduction to Information Security	3	1	0	4	
HBCS17C08	Computer Networks	3	1	0	4	
Practical						
HBCS17L03	Programming in Java Lab	0	0	6	2	
HBMG17L01	Soft Skill - I	0	0	6	2	

Semester - IV - Theory						
Sub. Code	Subject Name	L	T	P	C	Page No.
HBECE1	Allied Electronics - II	3	1	0	4	
HBCS17C09	Database Management System	3	1	0	4	
HBCF17C02	Cryptography	3	1	0	4	
HBCF17C03	Fundamentals of Threats and Vulnerabilities	3	1	0	4	
Practical						
HBCF17L01	Cryptography and Vulnerability Assessment Lab	0	0	6	2	
HBCS17L05	DBMS Lab	0	0	6	2	
HBMG17L02	Soft Skill - II	0	0	6	2	
4th Semester Credits					22	
3rd Semester Credits					24	
Semester - V – Theory						
Sub. Code	Subject Name	L	T	P	C	Page No.
HBMG14001	Environmental Studies	3	0	0	3	
HBCS17C13	Web Design	3	1	0	4	
HBCF17C04	Cyber Forensics	3	1	0	4	
HBCF17EXX	Elective - I	3	1	0	4	
HBCF17EYY	Elective - II	3	1	0	4	
Practical						
HBCS17L07	Web Design Lab	0	0	6	2	
HBCF17L02	Digital Forensics and Investigation Lab	0	0	6	2	
5th Semester Credits					23	
Semester - VI – Theory						
Sub. Code	Subject Name	L	T	P	C	Page No.
HBMG17G01	Entrepreneurial Development	3	0	0	3	
HBCF17C05	Cyber Laws and Ethics	3	1	0	4	
HBCF17EZZ	Elective - III	3	1	0	4	
Practical						
HBCF17P01	Project	0	0	12	10	
6th Semester Credits					21	

I Year - (I & II Sem)	- 20 + 20	= 40
II Year - (III & IV Sem)	- 24 + 22	= 46
III Year - (V & VI Sem)	- 23 + 21	= 44
Total Credit Requirement		= 130



**Dr.M.G.R
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UNIVERSITY**
(Declared U/S 3 of the UGC Act 1956)
B.B.A., BCA., B.Sc., B.Com முதல் பருவம்

நோக்கம்:

- வாய்மொழி இலக்கியத்தையும் செய்யுள் இலக்கியத்தையும் அறிந்து கொள்ளல்
- சிறுகதை மரபினைப்பறிந்து கொள்ளல்
- பிழைஇன்றித்தமிழ் எழுதுவதற்கு அடிப்படை இலக்கணத்தைப்பயிற்றுவித்தல்
- கவிதை மரபினையும் சிறுகதை மரபினையும் வரலாற்று நிலையிலிருந்து விளக்குதல்

தமிழ் - தாள் I

அலகு - 1

1. தாலாட்டு
2. காதல்
3. ஒப்பாரி
4. காணிநிலம் வேண்டும் - பாரதி
5. நல்லதோர் வீணை - பாரதி
6. தமிழக்காதல் - பாரதிதாசன்
7. தமிழ்வளர்ச்சி - பாரதிதாசன்
8. எந்நாளோ? - பாரதிதாசன்
9. ஆறு தன் வரலாறு கூறுதல் - கவிமணி தேசிய விநாயகம் பிள்ளை

அலகு - 2

1. வழித்துணை - ந.பிச்சுமரத்தி
2. குருடர்களின் யானை - அப்துல்ரகுமான்
3. முள் முள் முள் - சிற்பி

அலகு - 3 புதுமைப்பித்தன் கதைகள்

1. கடவுளும் கந்தசாமிப் பிள்ளையும்
2. செல்லம்மாள்
3. துன்பக்கேணி
4. ஆற்றங்கரைப் பிள்ளையார்
5. ஒருநாள் கழிந்தது

அலகு - 4

1. பெயர், வினை, இடை, உரிச்சொற்களின் பொது இலக்கணம், வலிமையும் இடங்கள், வலிமிகா இடங்கள்.

அலகு - 5

1. தமிழ்க் கவிதையின் தோற்றமும் வளர்ச்சியும் (மரபுக்கவிதை, புதுக்கவிதை)
2. தமிழ்ச்சிறுகதையின் தோற்றமும் வளர்ச்சியும் மரபுத் தொடர்கள், பொருந்தியசொல் தகுதல் கலைச் சொற்கள், நோக்கங்கள்

மேற்பார்வை நூல்கள்:

Vice Chancellor
Dr. M.G. சென்னைப் பல்கலைக்கழக வெளியீடு - 2013
EDUCATIONAL AND RESEARCH INSTITUTE UNIVERSITY
(Declared U/S 3 of the UGC Act 1956)
Periyar E.V.R. Road,

துணைவேந்தர் சீப்புதலுடன்

செய்யப்படுகிறது.

Prof. Dr. S. DINAKARAN

JOINT REGISTRAR

Dr. M.G.R.

Educational and Research Institute

University

(Decl. u/s.3 of UGC Act, 1956)

Periyar E.V.R. High Road

Maduravoyal, Chennai-600 096

தமிழ்த்துறைத் தலைவர்

டாக்டர் எம்.ஜி.ஆர்.

கல்வி மற்றும் ஆராய்ச்சி நிறுவனம்

பல்கலைக்கழகம்

மதுரவாயல், சென்னை - 600 096



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UNIVERSITY**
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BHI13001

HINDI - I

3 0 0 3

Prose, Administrative Hindi and Grammar.

UNIT I

9 Hrs

1. Sabhyata kaa rahasya - lesson and annotations ,Questions & answers,
2. Administrative terms (Prayojan mulak Hindi)

UNIT II

9 Hrs

1. Mitratha ka rahasya - lesson and annotations questions and answers
2. Patra lekhan, definitions, correspondence in hindi

UNIT III

9 Hrs

1. Paramanu oorja evam and kadhya sanrakshan (lesson) annotations and answers,
2. Technical terms and words, letter writing

UNIT IV

9 Hrs

1. Yuvavon se (lesson), annotations, essay and questions and answers
2. Types of official correspondence, technical terms
3. Grammar(Change of voice, correcting the sentences)

UNIT V

9 Hrs

1. Yogyata aur vyavasay ka chunav (Lesson) essay, questions and answers
2. Letter writing
3. grammar & technical terms

Total no of Hrs: 45**REFERENCES**

- ❖ Dr. Syed Rahmatullah & Poornima Prakashan, *Hindi gadhya maala*
- ❖ Dr. Syed Rahmatullah & Poornima Prakashan, *Prayojanmulak Hindi*
- ❖ Dakshin Bharat Hindi Prachara Sabha, T.Nagar, *Saral Hindi Vyakaran-2*

Syllabus for French

Semester I – French - I

Unit 1

Découvrir la langue française

- Se présenter, dire si on comprend, présenter une personne, nommer les choses, savoir vivre, comprendre la grammaire

Unit 2

Faire connaissance

- Donner des informations sur une personne, demander, exprimer ses préférences, parler de son travail, parler de ses activités, parler de son pays, de sa ville

Unit 3

Organiser son temps

- Dire la date, dire l'heure, donner des informations sur un emploi du temps, proposer-accepter-refuser, interroger-répondre, faire un programme d'activités

Unit 4

Découvrir son environnement

- S'orienter, Situer, Se loger, Exprimer la possession, Connaître les rythmes de vie, Fixer des règles

Unit 5

S'informer

- Dire ce qu'on fait, S'informer sur un emploi du temps passé, Expliquer, Exprimer la doute ou la certitude, Découvrir les relations entre les mots, Savoir s'informer

Recommended book :

Campus 1 – méthode de française by Jacky Girardet, Jacques Pécheur

S. Mani
13/06/2017
S. MANI/NEGALAI



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Faculty of Humanities and Science

Department of English

Syllabus for English

Semester I Paper I

Common to All UG Courses (H&S)

(i.e. B.B.A., B.C.A.(General), B.C.A.(Animation & Multimedia), B.Com. (General), B.Com. (A&F), B.Com. (C.S), B.Sc. (Comp. Sci.), B.Sc. (I.Sc.& Cyber Forensics), B.Sc.Comp.,(Science & Networking), B.Sc. (Electronics), B.Sc. (Media & Vis. Com.), B.Sc. (Bio.Tech), B.Sc. (Maths), B.Sc. (Physics), B.Sc. (Chemistry) etc)

Proposed for implementation from the Academic Year 2017-2018

Code: HBEN15001

L T P C

3 0 0 3

UNIT I

Prose: Literary Landscapes (Orient Black Swan)

UNIT II

Poetry: Literary Landscapes (Orient Black Swan)

UNIT III

Short Stories: Literary Landscapes (Orient Black Swan)

UNIT IV

One Act Plays: Literary Landscapes (Orient Black Swan)

UNIT V

Functional English

Total:

45 Periods

R. Anitha

HEAD, DEPARTMENT OF ENGLISH
DR. M.G.R. EDUCATIONAL AND RESEARCH INSTITUTE
MADURAVOYAL, CHENNAI - 600 095

SEMESTER I
From the Academic Year 2017-2018

COURSE OBJECTIVES:

1. to prepare students for attaining a comprehensive knowledge of the communication skills
2. to make them understand the nuances of the language and use its vocabulary in appropriate contexts
3. to develop in students a knowledge of the various techniques in language use
4. to develop in them analytical and interpretative skills
5. to train learners in organized academic and business writing

Unit I-PROSE- For Detailed Study

- | | |
|-------------------------------|-----------------|
| 1. On Running After One's Hat | G.K. Chesterton |
| 2. The Unexpected | Robert Lynd |
| 3. How to be a Doctor | Stephen Leacock |

Unit II- POETRY- For Detailed Study

- | | |
|------------------------------------|---------------------|
| 1. Ulysses | Lord Tennyson |
| 2. If | Rudyard Kipling |
| 3. Leave this Chanting and Singing | Rabindranath Tagore |

Unit III- SHORT STORY

- | | |
|----------------------------|--------------|
| 1. A Retrieved Reformation | O'Henry |
| 2. Engine Trouble | R.K. Narayan |

Unit IV – GLIMPSES FROM GREAT MINDS

- | | |
|------------------------|---------------------|
| 1. I lived with words | R.L. Stevenson |
| 2. My Vision for India | Dr. APJ Abdul Kalam |

Unit V - FUNCTIONAL ENGLISH

Enhancing LSRW Skills through Tasks

Note: Each lesson to be followed by text-based Vocabulary, Grammar, and Usage

Exercises

Synonyms, Antonyms- Affixes (prefixes & Suffixes)-Noun- Adjectives, Verb, Tense, Adverb, Preposition, 'if' clause, Articles, discourse markers, Reported and Direct speech- Voice, Degrees of comparison, Interrogatives
 Comprehension, Précis writing

R. M. K. S. K.

HEAD, DEPARTMENT OF ENGLISH
 TAMIL NADU UNIVERSITY OF EDUCATION
 CHENNAI

COURSE LEARNING OUTCOME:

Students completing the General English course

1. will be able to attain comprehensive knowledge of the four skills of communication viz. LSRW
2. will be able to understand the nuances of English Language as use its vocabulary in appropriate contexts
3. will have acquired the knowledge of the various techniques in language usage
4. will have acquired proficiency in analytical and interpretative skills
5. will be trained in organized and academic and business writing

Text Prescribed: Pushkala R, Padmasani Kannan, Chandrasena Rajeswaran, Anuradha V
Literary Landscapes, Orient Black Swan, 2017

Text Books, Reference Books and Web Resources

1. Pushkala R, P.A.Sarada, El Dorado: A Textbook of Communication Skills, Orient Blackswan, 2014
2. Padmasani Kannan.S., Pushkala.R. : Functional English
3. Hancock, Mark, English Pronunciation in Use; Cambridge Univ. Press, 2013
4. McCarthy, Michael et.al., English Vocabulary in Use, Advanced, Cambridge Univ. Press, 2011
5. Wren and Martin: Grammar and Composition, Chand & Co, 2006
6. Part I & Part II from Spring Board by Orient Black Swan Pvt. Ltd.
7. <https://learnenglish.britishcouncil.org>
8. www.englishpage.com
9. www.writingcentre.uottawa.ca/hypergrammar/preposit.html
10. www.better-english.com/grammar/preposition.html
11. <http://www.e-grammar.org/infinite-gerund/>
12. www.idiomsite.com/

R. Pushkala

HEAD, DEPARTMENT OF ENGLISH
 FOR EDUCATION INSTITUTE
 DEPT. OF ENGLISH
 Chennai - 600 005

Dr.M.G.R Educational and Research Institute, University, Chennai-95.

	ALLIED MATHEMATICS I	L T P C
		3 1 0 4

(Common to all Under Graduate H&S courses)

Course Outcomes:

- To understand the Basic concepts in Matrices
- To understand the Basic concepts in Trigonometry
- To understand the Basic concepts in Integration
- To understand the Basic concepts in Probability
- To understand the Basic concepts in Standard Distributions

UNIT I MATRICES

(12 hrs)

Elementary operations on Matrices – Rank of a Matrix – Solving simultaneous equations (atmost three equations with three unknowns).

UNIT II TRIGONOMETRY

(12 hrs)

Expansions of $\sin n\theta$, $\cos n\theta$ in powers of $\sin\theta$ and $\cos\theta$ – Expansion of $\tan n\theta$ – Expansions of $\sin^n\theta$ and $\cos^n\theta$ in terms of Sines and Cosines of multiples of θ – Hyperbolic functions – Separation into real and imaginary parts.

UNIT III INTEGRATION

(12 hrs)

Basic concepts of Integration – Methods of Integration – Integration by substitution – Integration by parts – Definite Integrals – Properties of Definite Integrals – Problems on finding Area using single integrals (simple problems).

UNIT IV INTRODUCTION TO PROBABILITY

(12 hrs)

Axioms of Probability – Conditional probability – Total probability – Baye's Theorem – Random variable – Probability mass function – Probability density function – Properties (Definition and simple problems).

UNIT V STANDARD DISTRIBUTIONS

(12 hrs)

Binomial – Poisson – Exponential – Normal distributions.

Total no. of hrs: 60

Reference Books:

- 1) Vittal.P.R, *Allied Mathematics*, Margham Publications., Chennai, (2012).
- 2) Venkatachalapathy.S.G, *Allied Mathematics*, Margham Publications., Chennai, (2007).
- 3) Singaravelu, *Allied Mathematics*, Meenakshi Agency., Chennai, (2001).
- 4) Gupta S.C., Kapoor V.K., *Fundamentals of Mathematical Statistics*, S.Chand & Co., (2007).
- 5) Vittal.P.R, Malini, *Statistical & Numerical Methods*, Margham Publications., Chennai, (2012).

T. Dharm
(HOD / Maths)
19.5.17

HBCS17C01	FUNDAMENTALS OF COMPUTER AND INTERNET	3	1	0	4
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UNIT: I **9 3 0**

Introduction to Computers - Generation of Computers - Classification of Digital Computer - Anatomy of Digital Computer

UNIT: II **9 3 0**

Introduction to Computer Hardware: CPU and Memory - Secondary Storage Devices - Input Devices - Output Devices

UNIT: III **9 3 0**

Introduction to Computer Software: Programming Language - Operating Systems - Introduction to Database Management System.

UNIT: IV **9 3 0**

Introduction to Computer Networks and Internets: Computer Networks - WWW and Internet - Email - Web Design

UNIT: V **9 3 0**

Introduction to Computer applications and Security: Computers at Home, Education, Entertainment, Science, Medicine and Engineering - Introduction to Computer Security - Computer Viruses, Bombs, Worms.

Total Number of Periods : 60

TEXT BOOK:

1. Fundamentals of Information Technology, Alexis Leon And Mathews Leon, Vikas Publishing House Pvt. Ltd, 2nd Edition, 2009

REFERENCE BOOKS:

1. Fundamentals of Computers and Information Technology, M.N Doja, 2005.

HBCS17C02	FUNDAMENTALS OF PROGRAMMING	3	1	0	4
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UNIT: I **9 3 0**

C fundamentals Character set - Identifier and keywords - data types - constants - Variables - Declarations - Expressions - Statements - Arithmetic, Unary, Relational and logical , Assignment and Conditional Operators - Library functions.

UNIT: II **9 3 0**

Data input output functions - Simple C programs - Flow of control - if, if-else, while, do-while, for loop, Nested control structures - Switch, break and continue, go to statements - Comma operator.

UNIT: III **9 3 0**

Functions -Definition - prototypes - Passing arguments - Recursion. Storage Classes - Automatic, External, Static, Register Variables.

UNIT: IV **9 3 0**

Arrays - Defining and Processing - Passing arrays to functions - Multi-dimension arrays - Arrays and String. Structures - User defined data types - Passing structures to functions - Self-referential structures - Unions - Bit wise operations.

UNIT: V **9 3 0**

Pointers - Declarations - Passing pointers to Functions - Operation on Pointers - Pointer and Arrays - Arrays of Pointers - Structures and Pointers - Files: Creating, Processing, Opening and Closing a data file.

Total Number of Periods : 60

TEXT BOOK:

1. Ashok N.Kamthane ,Programming with ANSI and Turbo C , Pearson Education, Aug 2009

REFERENCE BOOKS:

1. B.W. Kernighan and D.M.Ritchie, The C Programming Language, 2nd Edition, PHI, 2013.
2. H. Scheldt, C: The Complete Reference, 4th Edition, TMH Edition, 2000.
3. Kanetkar Y., Let us C, BPB Pub., New Delhi, 2016.

HBCS17L01	FUNDAMENTALS OF PROGRAMMING LAB	0	0	6	2
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1. Write a C Program to convert Celsius to Fahrenheit and vice versa.
2. Write a C Program to Find Whether the Given Year is a Leap Year or not.
3. Write a C Program to Add Digits & Multiplication of a number.
4. Write a C program to find the length of the String.
5. Write a C program to Reverse String without using Library Function.
6. Write a C Program to Find Whether the Given Number is Prime Number.
7. Write a C Program to Find Whether the Given Number is Armstrong Number.
8. Write a C Program to print Pascal Triangle.
9. Write a C Program demonstrating of parameter passing in Functions and returning values.
10. Write a C Program to find Fibonacci Series using Functions.
11. Write a C Program to find Factorial of a number using Do While Loop.
12. Write a C Program to make a simple Calculator to Add, Subtract, Multiply or Divide Using switch...case.
13. Write a C Program to print numbers from 1 to 10 using FOR loop.
14. Write a C Program to swap the values of two variables without using third variable.
15. Write a C Program to compute the sum of all elements stored in an array using pointers.



FORM NO - F/EP - E & T - / 0'8 Rev..00 Date 01.01.2014

டாக்டர். எம்.ஜி.ஆர்.
கல்வி மற்றும் ஆராய்ச்சி நிறுவனம்
பல்கலைக்கழகம்
அடையாளப்பட்டு, சென்னை - 600 095.

தமிழ்த்துறை
இரண்டாம் பருவம் - தமிழ்த்தாள்-II
பாடப்பகுதிகள்

அலகு-I

1. சிற்றிலக்கிய வரலாறு
2. கிறித்தவ இலக்கிய வரலாறு
3. இசுலாமிய இலக்கிய வரலாறு

அலகு-II

4. நந்திக் கலம்பகம்
5. முத்தொள்ளாயிரம்
6. தமிழ்விடு தாது

அலகு-III

7. திருக்குறறாலக் குறவஞ்சி
8. முக்கூடற்பள்ளு
9. இயேசுபிரான் பிள்ளைத்தமிழ்

அலகு-IV

10. நளவெண்பா
11. சீறாப்புராணம்

அலகு-V

மொழிப்பயிற்சி : பண்புத்தொகை, வினைத்தொகை, உம்மைத்தொகை, உருவகம், உவமைத்தொகை, வேற்றுமைத்தொகை, அன்மொழித்தொகை, இருபெயரொட்டுப் பண்புத்தொகை.

ஒரு பொருள் குறித்த பலசொல், பல பொருள் குறித்த ஒரு சொல், அகரவரிசைப்படுத்துதல், ஒருமை, பன்மை மயக்கம், பிறமொழிச் சொற்களை நீக்குதல்.

பார்வை நூல்கள் :

1. சென்னைப் பல்கலைக்கழக வெளியீடு-2013
2. பொது இலக்கணம்

தமிழ் பல்கலைக்கழகம்

Vice Chancellor
Dr. M.G.R.
EDUCATIONAL AND RESEARCH INSTITUTE
UNIVERSITY

தமிழ்த்துறைத் தலைவர்
டாக்டர் எம்.ஜி.ஆர்.
கல்வி மற்றும் ஆராய்ச்சி நிறுவனம்
பல்கலைக்கழகம்
மதுரவாயல், சென்னை - 600 095

Dr. M.G.R
Educational and Research Institute
University

New Syllabus

Hindi – Semester II – Paper – II (Poetry, Hindi Computing, Alankar)

Unit – I

1. Poetry – VirPooja, Kaidi aur Kokila – Kavi Parichay, Annotation, Summary
Makhanlal Chaturvedi

2. Poetry – Kabirdass – Sakhi – Kantasth 01 – 10 (Doha)

3. Alankar – Aupras and Upama only.

Unit – II

1. Poetry – Aansu, Shradha ka saundarya Annotation, Kavi Parichay, Summary

2. Poetry – Surdas – Two Padhya

Unit – III

1. Poetry – Subramaniya Bharathi – Nachenge – Hum Annotation, Kavi Parichay, Summary

2. Kaam Kaji Hindi Concept of Official Language and Hindi computing theory.

Unit – IV

1. Poetry – Galiv – Chunin da ser – Annotation, Summary, Kavi Parichay

2. Computer Internet in Hindi Latest tools and Packages

Unit – V

1. Kavi parichay, Jaishan kar Prasad, Subramaniya Bharathi and Mirzagalib, Makhanlalchaturvedi

2. Slesha Alankar

Ofam
(RADHA RAMAKRISHNAN)

Syllabus for French

Semester II – French - II

Unit 1

Cultiver ses relations

- Recevoir, Communiquer, Parler des personnes, Donner des informations, écrire, être à l'aise avec les autres

Unit 2

Découvrir le passé

- Parler du passé, raconter les moments d'une vie, parler de la famille, préciser le moment de la durée, parler des habitudes et des changements, connaître quelques repères de l'histoire

Unit3

Entreprendre

- Parler d'une entreprise, Exprimer un besoin, Parler du futur, Présenter les étapes d'une réalisation, Rapporter des paroles, Faire un projet de réalisation

Unit 4

Prendre des décisions

- Comparer des qualités, Comparer des quantités et des actions, Exprimer la ressemblance ou la différence, Faire des suppositions, Comparer des lieux, Parler de la télévision

Unit 5

Faire face aux problèmes

- Poser un problème, Caractériser une action, Parler de la sante, Interdire-Autoriser, Connaître la vie politique

Recommended book : Campus 1 – méthode de française by Jacky Girardet,
Jacques Pécheur

S. MANINAGALAI
13/06/2017



Dr. M.G.R.
Educational and Research Institute
University
(Declared as Deemed to be university u/s.3 of UGC Act 1956)
Maduravoyal, Chennai - 95
(An ISO 9001 : 2008 Certified Institution)



Faculty of Humanities and science

Department of English

Syllabus for English

Semester II Paper II

Common to All UG Courses (H&S)

(i.e. B.B.A., B.C.A.(General), B.C.A.(Animation & Multimedia), B.Com. (General), B.Com. (A&F), B.Com. (C.S), B.Sc. (Comp. Sci.), B.Sc. (I.Sc.& Cyber Forensics), B.Sc.Comp.,(Science & Networking), B.Sc. (Electronics), B.Sc. (Media & Vis. Com.), B.Sc. (Bio.Tech), B.Sc. (Maths), B.Sc. (Physics), B.Sc. (Chemistry) etc)

Proposed for implementation from the Academic Year 2017-2018

Code: HBEN14002

L T P C

3 0 0 3

UNIT I

Prose: Literary Landscapes (Orient Black Swan)

UNIT II

Poetry: Literary Landscapes (Orient Black Swan)

UNIT III

Short Stories: Literary Landscapes (Orient Black Swan)

UNIT IV

One Act Plays: Literary Landscapes (Orient Black Swan)

UNIT V

Functional English

R. Pruthi

HEAD, DEPARTMENT OF ENGLISH
MGR EDUCATIONAL RESEARCH INSTITUTE
CHENNAI - 600 095

Total:

45 Periods

SEMESTER II
FROM THE ACADEMIC YEAR 2017-2018

COURSE OBJECTIVES:

1. to prepare students to attain a comprehensive knowledge of the communication skills
2. to make them understand the nuances of the English language and use the vocabulary in appropriate contexts
3. to develop in students a knowledge of the various techniques in language usage
4. to develop in them analytical and interpretative skills
5. to train learners in organized, academic and business writing

Unit I- PROSE- For Detailed Study

1. Spoon Feeding
2. Disaster Management
3. If You are Wrong Admit it

W.R. Inge
 B.M. Hegde
 Dale Carnegie

Unit II – POETRY- For Detailed Study

1. Psalm of Life
2. Anthem for Doomed Youth
3. Street Cries

H.W. Longfellow
 Wilfred Owen
 Sarojini Naidu

Unit III – SHORT STORY

1. How Much Land does a Man Need?
2. Uncle Podger Hangs the Picture

Leo Tolstoy
 Jerome K. Jerome

Unit IV - DRAMA

1. Excerpts from The Merchant of Venice
2. Monkey's Paw

William Shakespeare
 W.W. Jacob

Unit V – FUNCTIONAL ENGLISH

Enhancing LSRW Skills through Tasks

Note: Each lesson to be followed by text-based Vocabulary, Grammar, and Usage Exercises

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 Chennai - 600 095

COURSE LEARNING OUTCOME:

Students completing the General English course

1. will be able to attain comprehensive knowledge of the four skills of communication viz.LSRW
2. will be able to understand the nuances of English Language as use its vocabulary in appropriate contexts
3. will have acquired the knowledge of the various techniques in language usage
4. will have acquired proficiency in analytical and interpretative skills
5. will be trained in organized and academic and business writing

Text Prescribed: Pushkala R, Padmasani Kannan, Chandrasena Rajeswaran, Anuradha V
Literary Landscapes, Orient Black Swan, 2017

Text Books, Reference Books and Web Resources

1. Pushkala R, P.A.Sarad , El Dorado: A Textbook of Communication Skills, Orient Blackswan, 2014
2. Padmasani Kannan.S., Pushkala.R. : Functional English
3. Hancock, Mark, English Pronunciation in Use; Cambridge Univ. Press, 2013
4. McCarthy, Michael et.al., English Vocabulary in Use, Advanced, Cambridge Univ. Press, 2011
5. Wren and Martin: Grammar and Composition, Chand & Co, 2006
6. Part I& Part II from Spring Board by Orient Black Swan Pvt. Ltd.
7. <https://learnenglish.britishcouncil.org>
8. www.englishpage.com
9. www.writingcentre.uottawa.ca/hypergrammar/preposit.html
10. www.better-english.com/grammar/preposition.html
11. <http://www.e-grammar.org/infinitive-gerund/>
12. www.idiomsite.com/



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 OR EDUCATION INSTITUTE
 ST. JOHN'S COLLEGE
 Chennai - 600 035

Dr.M.G.R Educational and Research Institute, University, Chennai-95.

	ALLIED MATHEMATICS II	L T P C
		3 1 0 4

(Common to all Under Graduate H&S courses)

Course Outcomes:

- To understand the Basic concepts in Ordinary Differential equations
- To understand the Basic concepts in Partial Differentiation
- To understand the Basic concepts in Multiple integrals
- To understand the Basic concepts in Linear programming
- To understand the Basic concepts in Transportation and Assignment

UNIT I ORDINARY DIFFERENTIAL EQUATIONS

(12 hrs)

First order differential equations – Second and higher order linear differential equations with constant coefficients and with RHS of the form: e^{ax} , x^n , $\sin ax$, $\cos ax$, $e^{ax}f(x)$, $x f(x)$ where $f(x)$ is $\sin bx$ or $\cos bx$ (simple problems).

UNIT II PARTIAL DIFFERENTIATION

(12 hrs)

Partial derivatives – Jacobians – Maxima and Minima of functions of two variables – Lagrange's multipliers.

UNIT III MULTIPLE INTEGRALS

(12 hrs)

Double integral in Cartesian and Polar Co-ordinates – Change of order of integration – Triple integral in Cartesian Co-ordinates (simple problems).

UNIT IV LINEAR PROGRAMMING

(12 hrs)

Formulation of LPP – Standard form of LPP – Graphical method – Simplex method – Big M method.

UNIT V TRANSPORTATION AND ASSIGNMENT

(12 hrs)

Formulation of Transportation problem – North West corner method – Least cost method – Vogel's approximation method – Optimality test – MODI method – Degeneracy – Assignment problem: Hungarian method.

Total no. of hrs: 60

Reference Books:

- 1) Vittal.P.R, *Allied Mathematics*, Margham Publications., Chennai, (2012).
- 2) Venkatachalapathy.S.G, *Allied Mathematics*, Margham Publications., Chennai, (2007).
- 3) Singaravelu, *Allied Mathematics*, Meenakshi Agency., Chennai, (2001).
- 4) Hamdy A. Taha, *Operations Research: An Introduction (10th ed.)*, Pearson, (2017).
- 5) Hira D.S., Gupta P.K., *Operations Research*, S.Chand & Co., (2014).

T. J. Jeyaraj
(HOD / Maths)
19-5-17

HBCS17C03	OBJECT ORIENTED PROGRAMMING	3	1	0	4
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UNIT: I **9 3 0**

Principles of Object Oriented Programming (OOP) : Evolution of C++ -Programming Paradigms - Key Concepts of OOP - Advantages of OOP - Usage of OOP and C++ .Input and Output in C++-Streams-Stream classes Unformatted console I/O operations-Member functions of istream class-manipulators-manipulators with parameters

UNIT: II **9 3 0**

Introduction to C++ - Tokens, Keywords, Identifiers, Variables, Operators, Expressions and Control Structures: If, If...Else, Switch - Repetitive Statements- for, while, do...while - Pointers and arrays

UNIT: III **9 3 0**

Functions in C++ - Main Function - Function Prototyping - Parameters Passing in Functions - Values Return by Functions - inline Functions - Function Overloading Classes and Objects; Constructors and Destructors; and Operator Overloading - Type of Constructors

UNIT: IV **9 3 0**

Inheritance: Single Inheritance - Multilevel inheritance - Multiple inheritances - Hierarchical Inheritance - Hybrid Inheritance. Pointers - Virtual Functions and Polymorphism

UNIT: V **9 3 0**

Working with Files: Classes for File Stream Operations - Opening and Closing a File - End-of-File Detection - File Pointers - Updating a File - Error Handling during File Operations - Command-line Arguments

Total Number of Periods : 60

TEXT BOOKS:

1. Ashok N.Kamthane, Object Oriented Programming with ANSI & Turbo C ++, Pearson Education, Aug 2009

REFERENCE BOOK:

1. E. Balagurusamy, Object Oriented Programming with C++, Mc Graw Hill, 4th edition, 2008.

HBCS17C04	DATA STRUCTURES	3	1	0	4
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UNIT: I **9 3 0**

Definition of a Data structure - primitive and composite Data Types, Arrays, Operations on Arrays, Ordered lists.

UNIT: II **9 3 0**

Stacks - Operations - Applications of Stack - Infix to Postfix Conversion, Recursion, Queue-operations.

UNIT: III **9 3 0**

Singly Linked List - Operations, Application - Representation of a Polynomial, Polynomial Addition; Doubly Linked List - Operations.

UNIT: IV **9 3 0**

Trees and Graphs: Binary Trees - Operations - Recursive Tree Traversals- Graph - Definition, Types of Graphs, Graph Traversal - DFS and BFS

UNIT: V **9 3 0**

Searching- linear and binary search – **Sorting:** Insertion, Bubble, Quick and Merge sort.

Total Number of Periods : 60

TEXT BOOKS:

1. C++ plus Data structure by N. Dale, publishers narosa publishing, Edition 2016.

REFERENCE BOOKS:

1. Data Structures, A. Chitra, P.T. Rajan, Tata McGraw Hill Education 2007.
2. Fundamentals of Data Structures, Ellis Horowitz, Sartaj Sahni, Dinesh Mehta, Universities Press, 2008.

HBCS17L02	DATA STRUCTURE LAB USING C++	0	0	6	2
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1. Implement PUSH, POP operations of stack using Arrays.
2. Implement enqueue and dequeue operations of a queue using Arrays.
3. Implement PUSH, POP operations of stack using Pointers.
4. Implement enqueue and dequeue operations of a queue using Pointers.
5. Implement Creation, insertion, and deletion operations in Singly linked list.
6. Implementation of breadth first search for given graph.
7. Implementation of depth first search for a given graph.
8. Sorting - Quick sort.
9. Implementation of Merge Sort using template.
10. Implementation of heap sort method in c++.

HBPH14A03	ALLIED ELECTRONICS-I	3	1	0	4
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Unit – I **9 3 0**

Number Systems: Number systems - Decimal, Binary, Octal, Hexadecimal - conversion from one to another. **Characters and codes:** ASCII code, Excess-3 code, gray code - binary addition, subtraction, multiplication and division - unsigned binary numbers - signed magnitude numbers - complements in number systems.

Unit – II **9 3 0**

Logic Gates: AND, OR, NOT, NOR & NAND gates, EX-OR gates. **Boolean Algebra and Boolean laws and theorems:** De Morgan's theorems - Duality theorem - simplification of sum of product and product of sum expressions - Karnaugh map and simplifications.

Unit –III **9 3 0**

Simple arithmetic circuits: Half and Full adders - Binary adder/ subtracter - BCD adder **Data processing circuits:** Multiplexers - Demultiplexers - Encoders and Decoders.

9 3 0

Unit – IV

Sequential Logic Design: Flip-flops - RS, JK, D & T Flip flops - Master/Slave Flip flop - Shift Registers - Counters - Asynchronous and Synchronous Counters. Digital to Analog Converters - Analog to Digital converters.

Unit – V **9 3 0**

Memory Elements: RAM - static RAM - Dynamic RAM - ROM - Magnetic Disk memories - Magnetic tape – Cache Memory – Error detection & Correction using Parity & Hamming code.

Total Number of Periods : 60

TEXT BOOK:

1. Digital Logic and Computer Design: M. Morris Mano 2nd Edition, Pearson Education, First Edition, 2008

REFERENCE BOOKS:

1. Virendra Kumar, "Digital Technology Principles and Practice", New Age International, New Delhi, 2015.
2. Donald P. Leach and Albert Paul Malvino, "Digital Principles and Application", Fifth Edition, Tata McGraw-Hill Publishing Company Ltd., New Delhi, 7th Edition, 2010.

HBCS17C05	PROGRAMMING IN JAVA	3	1	0	4
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UNIT: I **9 3 0**

Introduction to Java - Features of Java - Object Oriented Concepts - Data Types - Variables - Arrays - Operators - Control Statements-Input and output-Scanner and System class- print(),println(), and printf() methods.

UNIT: II **9 3 0**

Classes - Objects - Constructors - Overloading method - Access Control - Static and fixed methods - Inner Classes - String Class - Inheritance - Overriding methods - Using super- Abstract class – Type Wrapper classes for primitive types- Auto boxing and Auto Unboxing – Recursion.

UNIT: III **9 3 0**

GUI components – Common GUI Event types and Listener Interfaces- JoptionPane – JLabel, Jtextfield, JButton, JCheckBox, JTextarea, JComboBox, JList, JPanel – Mouse Event Handling - Adapter Classes- Key Event Handling.

UNIT: IV **9 3 0**

Layout Managers – Flow Layout, Border Layout, Grid Layout - Graphics and Java 2D – Graphics contexts and Graphics objects – Color control – Font Control – Drawing Lines, Rectangles and Ovals – JSlider – Using menus with Frames.

UNIT: V **9 3 0**

Packages - Access Protection - Importing Packages - Interfaces - Exception Handling - Throw and Throws - Thread - Synchronization - Runnable Interface - Inter thread Communication – Multithreading - I/O Streams - File Streams - Applets – Introduction to Java API Packages(java.lang and java.util)

Total Number of Periods : 60

TEXT BOOK:

1. Programming in Java – 2nd Edition by C.Muthu, TMH Publication, 2008.

REFERENCE BOOKS:

1. Java How to Program by Deitel & Deitel - 6th Edition- PHI Publication 2005.
2. Object Oriented Programming through JAVA, P Radha Krishna, Universities Press, Feb 2011.

HBCS17C06	OPERATING SYSTEM	3	1	0	4
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UNIT: I **9 3 0**

Introduction – Types of operating systems - operating system services - system calls and system programs

UNIT: II **9 3 0**

Process management - Process concepts - process scheduling - operation on process Inter process communication - CPU scheduling - scheduling algorithms - Deadlocks

UNIT: III **9 3 0**

Memory Management - Single and multiple partitioned allocation – paging -segmentation - Virtual Memory Management - Demand paging and Page Replacement Algorithms

UNIT: IV **9 3 0**

Information management - File concept - Access methods - Directory structure - allocation methods - free space management - disk scheduling.

UNIT: V **9 3 0**

UNIX: UNIX system - A Case Study.

Total Number of Periods : 60

TEXT BOOK:

1. Abraham Silberschatz and P. B. Galvin - Operating system concepts - Addison Wesley Publication, 9th Edition, 2013

REFERENCE BOOK:

Modern Operating System by Tanenbaum fourth edition Pearson Education, 2015.

HBCF17C01	INTRODUCTION TO INFORMATION SECURITY	3	1	0	4
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UNIT I INTRODUCTION**930**

Key Information Security Concepts - Critical Characteristics of Information - Components of an Information System – Systems Development Life Cycle - Security Systems Development Life Cycle - Security Professionals and the Organization

UNIT II NEED FOR SECURITY**930**

Business needs – Threats: Compromises to Intellectual Property, Deliberate Software Attacks, Deviations in Quality of Service, Espionage or Trespass, Forces of Nature Human Error or Failure, Information Extortion, Missing, Inadequate, or Incomplete Organizational Policy Planning and controls, Sabotage or Vandalism Theft, Technical Hardware and Software Failures, Technological Obsolescence - Attacks

UNIT III RISK MANAGEMENT**930**

Overview of risk management – Identification – Assessment – Control Strategies- Selecting a risk control strategy

UNIT IV PLANNING FOR SECURITY**930**

Information security planning and governance- policy standards and practices- security blue print- Education, training and awareness

UNIT V SECURITY TECHNOLOGY**930**

Access Control: Identification, Authentication, Authorization and Accountability – Firewalls: Processing modes, categories, architecture, configuring and maintaining, content filters

Total Number of Periods : 60**TEXT BOOKS:**

1. Michael E Whitman and Herbert J Mattord, “Principles of Information Security”, Vikas Publishing House, New Delhi, 2003
2. Micki Krause, Harold F. Tipton, “Handbook of Information Security Management”, Vol 1-3 CRC Press LLC, 2004.

REFERENCE BOOKS:

1. Stuart Mc Clure, Joel Scrambray, George Kurtz, “Hacking Exposed”, Tata McGraw-Hill, 2003
2. Matt Bishop, “ Computer Security Art and Science”, Pearson/PHI, 2002.

HBCS17C08	COMPUTER NETWORKS	3	1	0	4
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UNIT: I **9 3 0**

Introduction – Network Hardware – Software – Reference Models – OSI and TCP/IP models – Example networks: Internet, ATM, Ethernet and Wireless LANs - Physical layer – Theoretical basis for data communication - guided transmission media

UNIT: II **9 3 0**

Wireless transmission - Communication Satellites – Telephones structure –local loop, trunks and multiplexing, switching. Data link layer: Design issues – error detection and correction.

UNIT: III **9 3 0**

Elementary data link protocols - sliding window protocols – Data Link Layer in the Internet - Medium Access Layer – Channel Allocation Problem – Multiple Access Protocols.

UNIT: IV **9 3 0**

Network layer - design issues - Routing algorithms - Congestion control algorithms – IP protocol – IP Address – Internet Control Protocol.

UNIT: V **9 3 0**

Transport layer - design issues - Connection management - Addressing, Establishing & Releasing a connection – Simple Transport Protocol – Internet Transport Protocol (TCP) - Network Security: Cryptography.

Total Number of Periods : 60

TEXT BOOK:

1. A.S. Tanenbaum, Computer Networks, Fourth Edition, - Pearson Education, Inc, (Prentice hall of India Ltd), Delhi, Fifth Edition 2014

REFERENCE BOOKS:

1. Data Communications and Networking By Behrouz A. Forouzan, Tata McGraw Hill, 4th Edition, 2006.
2. Computer Networks by M.Bhanumathi, Charulatha Publications, 2013.

HBCS17L03	PROGRAMMING IN JAVA LAB	0	0	6	2
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1. Finding area and Perimeter of a circle. Use Scanner class.
2. Determining the order of numbers generated randomly using Random Class.
3. String Manipulation (Substring removal, string replacement etc.)
4. Drawing Rectangles, Ovals etc using Applet.
5. Implementing Thread based applications & Exception Handling.
6. Application using synchronization such as Thread based, Class based and synchronized statements.
7. Implementing GUI based applications using swing components (JLabel, JButton, and JTextfield)
8. Implementing GUI based application using Layout managers and menus.
9. Application using file streams (sequential file)
10. Application using file streams (Random file)



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FACULTY OF HUMANITIES AND SCIENCE
DEPARTMENT OF ENGLISH
CAREER AND CONFIDENCE BUILDING
SYLLABUS (2017- 2018)

HBMG14L01

L T P C
0 1 1 2

CURRICULUM
SOFT SKILL-I

Common to All UG Courses (H&S) (50+ 50)

(i.e. B.B.A., B.C.A.(General), B.C.A.(Animation & Multimedia), B.Com. (General), B.Com. (A&F), B.Com. (C.S), B.Sc. (Comp. Sci.), B.Sc. (I.Sc.& Cyber Forensics), B.Sc.Comp.,(Science & Networking), B.Sc. (Electronics), B.Sc. (Media & Vis. Com.), B.Sc. (Bio.Tech), B.Sc. (Maths), B.Sc. (Physics), B.Sc. (Chemistry) etc)

COURSE OBJECTIVES:

1. to diagnose the strength and weakness of the student in Functional English
2. to develop the functional grammar
3. to prepare them to use Functional English through LSRW
4. to make them learn through practice and activity
5. to use English Language as a life skill

Prelude

Diagnostic Test- Articles, Forms of 'be' verbs, Tense, Preposition, Gerunds & Infinitives, Reported Speech, Active & Passive Voice, Letter Writing

Unit I

6 hours

Job and career- three types- Govt.,pvt and public sector-Bank, govt.offices, navy, defense, govt.institutions-IT and,BPo and corporate-semi govt like ISRO etc- requirements- advt- skills needed (download the details)

Delivery

Audio and video cassettes

Unit II

6 hours

Technical skill- Communication skill especially in English- strengthening communicative English-Listening, Reading, speaking and writing- Listening- sounds of vowels and consonants and writing them-functional English -difference between functional and theoretical English

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INSTITUTE

Unit III**6 hours**

Listening and writing

Activity based exercises on articles, modals, prepositions and infinitives

The above topics are chosen as we don't find equivalents' in LI

Unit IV**6 hours**

Reading and writing

Vocabulary-synonym, antonym, collocations, confused words, homonym, odd man out, words with correct spelling, avoid redundancy –Inferential comprehension (based on BEC and Blog on Soft Skills BY me)-browsing , skimming and scanning note- making

Unit V**6 hours**

Speaking

Introducing yourself (giving questions)- collecting information in pairs and presenting it for 2 minutes – story telling through picture- interpretation of psychometric pictures through question and answer – PPT preparation and presentation-developing the story in pairs as game

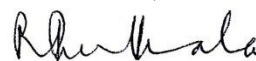
Total:**30 Periods****Text Book , Reference Books and Web Resources:**

1. Soft Skill for Everyone-Jeff Butterfield,Part-1; Unit-D&E
2. EFA (English For All)- Dr. Padmasanni Kannan, Libin Roy Thomas
3. English for Competitive Exam- R.P. Bhatnagar,Rajul Bhargava
4. Soft Skill Blog
5. Jobsearch.about.com
6. www.exsearch.in/interview.html

COURSE LEARNING OUTCOME:

Students completing the course Soft Skill-I will be able to

1. know their weakness in the use of English Language.
2. understand the functionality of the language in simple context.
3. improve their communication skill through LSRW.
4. improve the functional grammar through practice and activity.
5. understand the necessity of English Language.



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 DISTANCE EDUCATION AND RESEARCH
 OCEANIC UNIVERSITY
 Chennai 600 005

HBECE1	ALLIED ELECTRONICS-II	3	1	0	4
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UNIT – I : SINGLE SIDEBAND AND COMMUNICATIONS SYSTEMS 9 3 0

Introduction - Definitions - Theory of amplitude modulation and modulation index - sidebands produced in amplitude modulation – Power distribution on an AM Waves - Methods of amplitude modulation – Phase modulation - INtroduction - Definition - Express for FM wave – sideb and terms produced in frequency modulation - Phase modulation – Frequency Modulation method - Comparative advantages, disadvantages and merits of FM, PM and AM.

UNIT – II: 9 3 0

RADIO RECEIVERS: Introduction - classification fo radio receivers – Superheterodyne receivers - AM Receivers - Receiver Charactertics - Receiver Noise – SSB Receivers - FM Receiver - Effect of Noise - Amplitude and Frequency modulation.

UNIT – III : 9 3 0

DIGITAL AND DATA COMMUNICATION: Introduction - Types of analog pulse modulation - Generation and demodulation of PAM waves - pulse duration (width) modulation (PWM) - Pulse Position Modulation (PPM) - Generation and demodulation of PPM - Pulse Code Modulation (PCM) - Generation and demodulation of PCM - Multiplex Transmission - Frequency Division Multiplexing - Time Division Multiplexing.

UNIT IV : BASEBAND DATA TRANSMISSION 9 3 0

History of wireless communication - A simplified reference model - Frequencies for radio transmission - multiplexing - frequency division multiplexing - time division multiplexing - code division multiplexing - modulation - amplitude shift keying - frequency shift keying - phase shift keying - advanced frequency shift keying - advanced phase shift keying - multi carrier modulation.

UNIT – V : CELLULAR TELEPHONE COMMUNICATION SYSTEM 9 3 0

GSM - Mobile Services - System Architecture - Radio Interface - Protocols - Localisation and calling - Handover - Security - New Data Services.

Total Number of Periods : 60

TEXT BOOK:

1. N.D. Deshpande, D.A. Deshpande, P.K. Rangole, Communication Electronics, Tata McGraw Hill Publishing Company Limited, Seventh Reprint, New Delhi.,1989.

REFERENCE BOOKS:

1. Jochen H. Schiller, Mobile Communication, Pearson Education Ltd., Seventh Impression 2008, New Delhi.
2. B. Basavaraj, H.N. Shivashankar, “Basic Electronics”, 2nd Edition, Universities Press 2015.

HBCS17C09	DATABASE MANAGEMENT SYSTEM	3	1	0	4
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UNIT: I **9 3 0**

Purpose of Database - Overall System Structure - Entity Relationship Model - Mapping Constraints - Keys - E-R Diagrams - **Relational Model** - Structure

UNIT: II **9 3 0**

Structured Query Language - Basic Structure - Set Operations - Aggregate Functions - Date, Numeric, and Character Functions - Nested Sub queries -Modification Of Databases - Joined Relations-DDL - Embedded SQL.

UNIT: III **9 3 0**

Relational Database Design - Pitfalls - Normalization Using Functional Dependencies - First Normal Form-Second Normal Form-Third Normal Form-Fourth Normal Form And BCNF.

UNIT: IV **9 3 0**

Indexing & Hashing - File and system structure – overall system structure file transaction – data dictionary – indexing and hashing basic concepts. static and dynamic hash functions Transaction Management

UNIT: V **9 3 0**

Transactions - Transaction Concept- Properties of a Transaction- A Simple Transaction Mode-Concurrent Executions- Schedules- Serial and Non Serial types-Serialization of schedules and views-locks based protocols-time based protocols.

Total Number of Periods : 60

TEXT BOOKS:

1. Abraham Silberschatz, H.F.Korth and S.Sudarshan-Database System Concepts McGraw Hill Publication., 6th Edition, 2013
2. Singh-Database systems: Concepts, Design & applications, Pearson Education, 2nd Edition, 2011

REFERENCE BOOKS:

1. Gerald V.Post - DBMS-Designing and Business Applications - McGraw Hill Publications
2. Michael Abbey and Michael.J.Corey-Oracle- A Beginners guide TMH

HBCF17C02	CRYPTOGRAPHY	3	1	0	4
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UNIT – I INTRODUCTION 9 3 0

Computer Security concepts – OSI Security architecture- – security attacks – security services- security mechanisms – classical encryption techniques

UNIT – II BLOCK CIPHERS AND ENCRYPTION STANDARDS 9 3 0

Block cipher – design principles – Data Encryption Standard (DES) – Strength of DES- Differential and Linear Cryptanalysis - Triple DES – AES

UNIT – III ASYMMETRIC CIPHERS 9 3 0

Principle of public key cryptosystems – RSA Algorithm – Diffie – Hellman Key Exchange Elliptic curve arithmetic- Elliptic curve cryptography

UNIT – IV DATA INTEGRITY ALGORITHMS 9 3 0

Simple hash functions-Requirements and security-Secure Hash algorithm(SHA)- Message authentication requirements, functions and codes- Digital Signatures

UNIT – V INTERNET SECURITY 9 3 0

Pretty Good Privacy PGP – S/MIME- Domain Keys Identified Mail DKIM – IP Security overview- IP Security Policy – Encapsulating Security payload

Total Number of Periods : 60

TEXT BOOKS

1. William Stallings, “Cryptography and Network Security: Principles and practice”, Pearson Education Inc.2016

REFERENCES

1. Baxer, “Networking Security”, McGraw Hill, 1996.
2. Derek Atkins, “Internet Security”, Techmedia, 1998.

HBCF17C03	FUNDAMENTALS OF THREATS AND VULNERABILITIES	3	1	0	4	36
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Unit-I Information Systems Security **9 3 0**

Introduction,Risks,Threats and Vulnerabilities,Tenets of Information Systems Security, The Sevendomains of IT Infrastructure,IT Security Policy Framework.

Unit-II Malicious Attacks,Threats and Vulnerabilities **9 3 0**

Introduction,Categories of Threats,Deliberate software attacks,Deviations in QOS,Human Error,Vandalism,Theft,Hardware Failures,Software Failures,Attacks

Unit-III Managing IT Risk **9 3 0**

Risk Management,Risk Identification,Risk Assesment and Risk Control Strategies

Unit-IV Security Technology **9 3 0**

AccessControl:Identification,Authentication,Authorization,Accountability, Firewalls, Protecting Remote connections

Unit-V Prevention Systems and Security Tools **9 3 0**

Intrusion Detection and Prevention Systems,Honeypots,Honeynets,Scanning and Analysis Tools

Total Number of Periods : 60

Text Book:

1. Principles of Information Security by Michael E.Whitman and Herbert J.Mattord,4th Edition.

Reference Books:

1. Fundamentals of Information Systems Security by David Kim and Michael G.Solomon-Jones and Bartlett Learning
2. Handbook of Information Security Management by Tipton RuthbeRg25th

HBCF17L01	CRYPTOGRAPHY AND VULNERABILITY ASSESSMENT LAB	0	0	6	2
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CRYPTOGRAPHY

Using Cryp Tool Portal perform the following the following Encryption TEchniques

1. Symmetric Encryption
 - Ceaser Cipher
 - Playfair Cipher
 - Hill Cipher
 - Vigenère Cipher
2. Block Ciphers and Data Encryption Standards
 - DES
 - Triple DES
 - AES
3. Hash Functions
 - SHA
 - MD5
4. Implementation of Digital Signature and PKI
5. Cryptanalysis of algorithms
 - Vigenère
 - RSA
 - AES

VULNERABILITY ASSESSMENT

6. Network Mapping & Target Identification
7. Interpreting Tool Output - Interpreting output from port scanners, network sniffers and other network enumeration tools.

HBCS17L05	DBMS LAB	0	0	6	2
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I. Program to learn SQL commands

1. Execution of DDL Commands
2. Execution of DML Commands
3. Insert Command
4. Select, From and Where Clause
5. Set Operation [Union, Intersection, Except]
6. Nested Queries
7. Join Operation
8. Modification of the Database



Dr. M.G.R.
Educational and Research Institute
University
(Declared as Deemed to be university u/s.3 of UGC Act 1956)
Maduravoyal, Chennai - 95
(An ISO 9001 : 2008 Certified Institution)



FACULTY OF HUMANITIES AND SCIENCE
DEPARTMENT OF ENGLISH
QUALITATIVE AND QUANTITATIVE SKILLS
SYLLABUS – 2017 – 2018

HBMG14L02

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CURRICULUM
SOFT SKILL-II

Common to All UG Courses (H&S) (50+ 50)

(i.e. B.B.A., B.C.A.(General), B.C.A.(Animation & Multimedia), B.Com. (General), B.Com. (A&F), B.Com. (C:S), B.Sc. (Comp. Sci.), B.Sc. (I.Sc.& Cyber Forensics), B.Sc.Comp.,(Science & Networking), B.Sc. (Electronics), B.Sc. (Media & Vis. Com.), B.Sc. (Bio.Tech), B.Sc. (Maths), B.Sc. (Physics), B.Sc. (Chemistry) etc)

COURSE OBJECTIVES:

1. to strengthen the students with the needed vocabulary
2. to infer information from the given passage through reasoning
3. to train them in attending Group Discussion
4. to face the Technical and HR interview of the corporate
5. to raise communication proficiency to global standards

HBMG14L02

L T P C
0 1 1 2

Unit 1

6 hours

Preparation of resume-functional resume with objective according to different advts.-how to have interview file—how to send it by email-concept of writing email-practise through BEC method(questions and answer)

Unit 2

6 hours

Writing secretarial letters like intra-mail and inter-mail, agenda, memo and business reports-introducing GD through video-conduct of GD on a topic and also case studies

Unit 3

6 hours

Body language-grooming –Interview skill- Dos and Donts- mock interview –exchange of interviewer and interviewee practical session

HEAD, DEPARTMENT OF ENGLISH

Dr. M.G.R. EDUCATIONAL & RESEARCH INSTITUTE

MADURAVOYAL, CHENNAI - 600 095

Date: _____

Unit 4 (Department of Mathematics)
6 hours

Number system – H.C.F & L.C.M – Problem on ages – Percentage – Profit & Loss – Ratio & Proportion – Partnership.

Unit 5

6 hours

Time & Work – Time & Distance – Clocks – Permutations & Combinations – Heights & Distances – Odd man out and Series.

Total:

30 Periods

TEXT BOOKS, REFERENCE BOOKS AND WEB RESOURCES:

1. Soft Skill for Everyone-Jeff Butterfield,Part-1; Unit-D&E
2. EFA (English For All)- Dr. Padmasanni Kannan, Libin Roy Thomas
3. English for Competitive Exam- R.P. Bhatnagar,Rajul Bhargava
4. Placement Interview- S.Anandamurugan,Chapter-2&3
5. Alex K, Soft Skills ; S. Chand & Company Pvt Ltd, 2009
6. Rizvi Ashraf M, Effective Technical Communication ; Tata McGraw – Hill ; 2005
7. Thorpe, Edgar, Course in Mental Ability and Quantitative Aptitude : Tata McGraw – Hill, 2003
8. Agarwal, R.S, A Modern Approach to Verbal and Non-verbal Reasoning, S. Chand & Co ;2004
9. R.S.Agarwal, Quantitative Aptitude for Competitive Examinations, S.Chand & Co., (2017)
10. Jobsearch.about.com
11. www.exsearch.in/interview.html

COURSE LEARNING OUTCOME:

Students completing the course Soft Skill-II will

1. be strengthened in the vocabulary
2. improve their reasoning and finding a logical sequence in the passage given
3. be prepared to face Group Discussion
4. know the nuances of the interview of the corporate
5. raise communication proficiency to global standards

R. Muthu

HEAD, DEPARTMENT OF ENGLISH

FOR EDUCATIONAL ACADEMY

CHENNAI

CHENNAI

ENVIRONMENTAL STUDIES

L	T	P	C
3	0	0	3

UNIT I ENVIRONMENT AND ECOSYSTEMS

Definition, scope and importance of environment – need for public awareness – concept, structure and function of an ecosystem – producers, consumers and decomposers – energy flow in the ecosystem. Biodiversity at National and local levels – India

UNIT II ENVIRONMENTAL POLLUTION

Definition – causes, effects and control measures of: (a) Air pollution (b) Water pollution (c) Soil pollution (d) Marine pollution (e) Noise pollution (f) Nuclear hazards (g) E-Wastes and causes, effects and control measures

UNIT III NATURAL RESOURCES

Forest resources: Use and over-exploitation, deforestation. Water resources: Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams-benefits and problems. Food resources: World food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problems.

UNIT IV SOCIAL ISSUES AND THE ENVIRONMENT

From unsustainable to sustainable development – urban problems related to energy – water conservation, rain water harvesting, watershed management – resettlement and rehabilitation of people; its problems and concerns climate change, global warming, acid rain, ozone layer depletion, nuclear accidents, central and state pollution control boards- Public awareness.

UNIT V HUMAN POPULATION AND THE ENVIRONMENT:

Population growth, variation among nations – population explosion, environment and human health – human rights – value education – HIV / AIDS – women and child welfare – role of information technology in environment and human health

TOTAL: 45 Hrs

PERIODS TEXT BOOKS: 1. Gilbert M.Masters, 'Introduction to Environmental Engineering and Science', 2nd edition, Pearson Education (2004).

Benny Joseph, 'Environmental Science and Engineering', Tata McGrawHill, New Delhi, (2006).

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Biotech BOS
Regulatory Ho

HBCS17C13	WEB DESIGN	3	1	0	4
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UNIT: I **9 3 0**
 Introduction to HTML: Internet Basics, Web server–Web Client–HTML tags–Structure of HTML program–Text Formatting– Introduction to List – ordered, unordered and nested list.

UNIT: II **9 3 0**
 Tables and Graphics: Introduction to Tables – Table Attributes: Align, Valign, Width, Border, Cell padding, Cell Spacing, Colspan, Rowspan. Graphics: Selecting a Graphics Format – Preparing Graphics for Web Use – Inserting Graphics – Arranging Elements on the Page – Controlling Image Size and Padding.

UNIT: III **9 3 0**
 Links, Forms & Frames: Linking documents–Image as hyperlinks – Creating User Forms – Using Frames for Layout – Frameset Element – Nested Frameset. Introduction to Style sheets – Formatting Text by Using Style Sheets – Formatting Paragraphs by Using Style Sheets.

UNIT: IV **9 3 0**
 Introduction to Javascript - Advantage of Javascript - Javascript Syntax - Datatype - Variable - Array - Operator and Expression - Looping Constructor - Function - Dialog box.

UNIT: V **9 3 0**
 The JavaScript document object model: Introduction – JavaScript Assisted Style Sheets (JSSS DOM) – Understanding objects in HTML: Browser Objects– Object Heirarchy – Handling Events Using JavaScript.

Total Number of Periods : 60

TEXT BOOK:

1. Ivan Bayross, Web Enable Commercial Application Development Using HTML, DHTML, JavaScript, Perl CGI, BPB Publications, 2009

REFERENCE BOOK:

1. T. A. Powell, Complete Reference HTML (Third Edition), TMH, 5th Edition, 2010

Introduction – Use of computer forensics in law enforcement- forensic services- forensics methodology- forensic specialists- types of forensic technology- specialized forensics techniques-hidden data-spyware hidden data- spyware- encryption methods and vulnerabilities protecting data- internet tracing methods

Internet Security systems- Intrusion Detection Systems- Firewall Security Systems- Storage Area Security Systems- Network Disaster Recovery Systems – Identity theft- Biometric Security Systems

Data backup and recovery- role of backup in data recovery- data recovery solution- hiding and recovering hidden data- Types and rules of evidence- collection and archiving- methods of collection – Chain of custody- reconstructing the attack

Preserving digital crime scene- evidence processing steps- legal aspects- evidential authentication- practical considerations -practical implementation

Discovery of Electronic evidence- Electronic Document Discovery- identification of data- time keeping- forensic identification and analysis of technical surveillance devices – reconstructing past events- usable and unusable file formats – converting files Cyber forensics tools and case studies.

TEXT BOOK:

1. Computer Forensics: Computer Crime Scene Investigation Second Edition Charles River Media, Inc. John R. Vacca

1. Handbook of Digital and Multimedia Forensic Evidence [Paperback] John J. Barbara
2. Computer Forensics: Investigating Network Intrusions and Cyber Crime (Ec-Council Press Series: Computer Forensics)
3. CyberForensics: Understanding Information Security Investigations (Springer's Forensic Laboratory Science Series) by Jennifer Bayuk

HBCS17L07	WEB DESIGN LAB	0	0	6	2
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1. Write HTML code to develop a web page having the background in red and title “My First Page” apply marquee in any other color, giving details of your name, age, address
2. Write a web page to display list of names using ordered & unordered list.
3. Write HTML code to create a Webpage that contains an image at its left hand side of the page, when user clicks on the image; it should open another web page.
4. Write a HTML code to create a floating image with paragraph tags
5. Create a web page to display a table and fill in the data in the table created.
6. Create a web page having two frames one containing links and another with contents of the link. When link is clicked appropriate contents should be displayed on Frame.
7. Create a simple form accepting – Name, Register No. and Submit Button
8. Write a simple style sheet using font-size property for text sizes
9. Create a style sheet to implement the class attribute and id to differentiate the text color
10. To compute Fibonacci sequence using JavaScript
11. Write a simple JavaScript program to Copy Text from Different Field.
12. To check the given number is odd or even using JavaScript.
13. To implement switch case to find the days of the week JavaScript.

HBCF17L02	DIGITAL FORENSICS AND INVESTIGATION LAB	0	0	6	2
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Using relevant open source tools perform the following analysis

1. Steganography and its detection
2. Photo Morphing
3. Warping
4. Pan Sequences
5. Quick Crypto Forensics
6. Anti virus Forensics
7. Forensics investigations using Encase
8. Mobile Forensics
9. Recovering deleted files and partitions
10. Investigative reports

	ENTREPRENEURIAL DEVELOPMENT	L T P C
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Unit – I Concept of Entrepreneurship

Entrepreneurship – Meaning – Types – Qualities of an Entrepreneur – Classification of Entrepreneur – Factors influencing Entrepreneurship – Functions of Entrepreneurships.

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Unit – II Entrepreneurial Development Agencies

Commercial Banks – District Industries Centre – National Small Industries Corporation – Small Industries Development Organisation – Small Industries Service Institute, All India Financial Institutions – IDBI – IFCI – ICICI – IRDBI.

Unit – III Project Management

Business idea generation techniques – Identification of Business Opportunities – Feasibility study – Marketing, Finance, Technology and Legal Formalities – Preparation of project report – Tools of Appraisal.

Unit – IV Entrepreneurial Development Programmes

Entrepreneurial Development Programmes (EDP) – Role, relevance and achievements – Role of Government in organising EDPs – Critical Evaluation.

Unit – V Economic Development and Entrepreneurial Growth

Role of Entrepreneurs in Economic Growth – Strategic approaches in the changing Economic scenario for small scale Entrepreneurs – Networking, Niche play, Geographic Concentration, Franchising / Dealership – Development of Women Entrepreneurship.

Books:

1. *Dr. V. Balu – ENTREPRENEURIAL DEVELOPMENT*
2. *Dr. P.T. Vijayashree & Dr. M. Alagammal – ENTREPRENEURIAL DEVELOPMENT*

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HBCF17C05	CYBER LAWS AND ETHICS	3	1	0	4
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UNIT: I**9 3 0**

Cyber laws and rights in today's digital age; IT Act, Threats to information resources, including military and economic espionage, communications eavesdropping, computer break-ins, denial-of-service, destruction and modification of data, distortion and fabrication of information, forgery, control and disruption of information- Countermeasures, intrusion detection, firewalls - limitations of those countermeasures- Information warfare policy-ethical Issues.

UNIT: II**9 3 0**

The Cyberspace – Protection of Copyrights of Cyber Space – Rights of Software Owners – Infringement of Copyright – remedies for infringement of Copyright on Cyberspace –liabilities of an Internet Service Provider (ISP) in Cyberspace – Cyberspace and the Protection of Patents in India.

UNIT: III**9 3 0**

An Overview of Cyber Crimes – Indian Evidence Act – Examiner of Electronics Act – Amendments Introduced in Indian Evidence Act, 1872 – IT Act as Amended upto 2008 –

UNIT: IV**9 3 0**

IT (Certifying Authorities) Rules, 2000 – Ministerial Order on Blocking of Websites – The IT (Use of Electronics Records and Digital Signatures) Rules 2004-Cyber Appellate tribunal - Its Function and Powers under IT Act – Obscenity and pornography on Cyberspace – Hacking on Cyberspace on Internet – Other Offences

UNIT: V**9 3 0**

Violation of the Right of Privacy on Cyberspace / Internet – Punishment for violation of Privacy, Breach of Confidentiality and Privacy under the IT Act – Terrorism on Cyberspace / Internet- Ethics in Cyber Space- ethical values in digital space

Total Number of Periods : 60**TEXT BOOK:**

1. Text Book on Cyber Law by Pavan Duggal, Second edition-2016

REFERENCE BOOKS:

1. Cyber Laws and it Protection Paperback – 2012 by Harish Chander
2. Understanding Laws– Cyber Laws And Cyber Crimes Paperback – Jun 2014 by

HBCF17P01	PROJECT	0	0	12	10
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Students are expected to carry out the following:

- (i) Implement the Design using suitable technologies.
- (ii) Generate the test cases.
- (iii) Demonstrate the solution with suitable user interface.
- (iv) Prepare a project report consolidating the phase-I and II activities.

ELECTIVES

HBCS17C14	FUNDAMENTALS OF CLOUD COMPUTING	3	1	0	4
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UNIT: I**9 3 0**

Overview of Cloud Computing: Introduction- NIST Cloud Model- Benefits of Cloud Computing- Challenges of Cloud Computing- Cloud-Enabling Technologies- Cloud Standards and References

UNIT: II**9 3 0**

Cloud Deployment and Service Models- Cloud Deployment Models- Cloud Service Delivery Models- Software as a Service- Platform as a Service- Infrastructure as a Service-X as a Service

UNIT: III**9 3 0**

Cloud Reference Architecture: Introduction to Reference Framework - Role-based Cloud Computing Reference Architectures - Layer-based Cloud Computing Reference Architectures

UNIT: IV**9 3 0**

Cloud Storage System - Basics of Cloud Storage - Cloud Storage Models - Mobile Cloud Storage - Advantages and Limitations of Cloud Storage - Cloud Storage Architecture - Cloud Storage Devices - Cloud File Systems

UNIT: V**9 3 0**

Introduction to Virtualization - Need for Virtualization -Benefits of Virtualization -Limitations of Virtualization - Approaches to Virtualization - Types of Virtualization -Computer System Architecture

Total Number of Periods : 60**TEXT BOOK:**

1. Kannammal, “Fundamentals of Cloud computing” , Cengage Learning India Private Limited, Edition (2015)

REFERENCE BOOKS:

1. Arshdeep Bahga, “Cloud Computing: A Hands-on Approach”, Universities Press, 2014.
2. Michael Miller, “Cloud Computing”, Pearson Education, New Delhi, 2009.

HBCS17C11	SOFTWARE ENGINEERING	3	1	0	4
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UNIT: I **9 3 0**
The Product - the process - project management concepts - software projects and project metrics.

UNIT: II **9 3 0**
Software project planning - risk analysis and management - project scheduling and tracking - software quality assurance.

UNIT: III **9 3 0**
Software configuration management - System Engineering - analysis concepts and principles - analysis modelling.

UNIT: IV **9 3 0**
Design concepts and principles - architectural designs - user interface design.

UNIT: V **9 3 0**
Component level design - software testing techniques - software testing strategies - technical metrics for software

Total Number of Periods : 60

TEXT BOOK:

1. Roger S. Pressman - Software Engineering A Practitioner's Approach - 5th edition, McGraw hill, Seventh Edition.

REFERENCE BOOK:

1. Ian Sonunerville Software Engineering - 5th Edition - Addison Wesley.

HBCF17E01	FINANCIAL FRAUDS	3	1	0	4
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Unit : I**9 3 0**

Cyber Crime Overview : Introduction to Cyber Crime :Concepts and Techniques - Channels of Cyber Crimes - Cyber Crime Methods: Stalking & Cyber Squatting, Cyber Extortion & Cyber Cheating, Cyber warfare & Cyber Terrorism Phishing & Hacking - Computer Insecurity Internet Crime & Internet fraud I User Failures & Causes Bank Failure 5. Computer Hackers

Unit : II**9 3 0**

Computer Fraud Protection Computer Fraud Protection : Prevention, Detection and mitigation Controls Encryption / Decryption - Incident of Cyber crimes : Cyber Crime Reporting , Cyber Crime Investigation, Cyber Crime Management , Evidence Collection & Chain of Custody , Cyber Crime Risk Management

Unit : III**9 3 0**

Online Transactions : Concepts, Emerging Trends and Legal Implications - Global Payment Processing

Unit : IV**9 3 0**

Payment Cards & Data Security - Electronic Card Frauds : ATM Cards , Credit Cards, Smart Cards

Unit : V**9 3 0**

Cyber Law in India : Information Technology Act - 2000 - Electronic Transactions and Taxation Issues - Human traits : Associates Behaviour - Regulatory Compliance

Total Number of Periods : 60**TEXT BOOK:**

1. "Cyber Crimes and Fraud Management", IIFB, Macmillan Publication, 2014

REFERENCE BOOKS:

1. "Information System for Banks, Macmillan Publication", IIFB, 2nd Edition 2017
2. "Prevention of Cyber Crimes and Fraud Management" IIFB Macmillan Publication 2017

HBCS17E04	DATA MINING	3	1	0	4
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UNIT-I **9 3 0**

DATA WAREHOUSING: Introduction – What is a Data Warehousing-Definition- Data Warehouse Vs Database – Advantage and Disadvantage of Data Warehousing - Data Warehousing Architecture – Dimensional Modelling – Categorisation of Hierarchies – Aggregate Function.

UNIT-II **9 3 0**

OLAP: OLAP Operations – Data Cube: A Multidimensional Data Model – OLAP Server – ROLAP – MOLAP – Cube Computation.

UNIT-III **9 3 0**

DATA MINING: Introduction –What is a Data Mining- Definition-KDD vs Data Mining- DBMS vs DM-Other Related Areas-DM Techniques-Other Mining Problems-Issues and Challenges in DM-DM Application areas.

UNIT-IV **9 3 0**

ASSOCIATION RULES: Introduction-What is an Association Rule-Methods to discover Association Rules- APriori Algorithm- **DECISION TREES:** What is a Decision Tree-Tree Constructing Principle- Best Split-Decision Tree Construction Algorithm-CART-ID3-C4.5.

UNIT-V **9 3 0**

WEB MINING: Introduction-Web Mining –Web content Mining- Web Usage Mining- Text Mining- Unstructured Text.

Total Number of Periods : 60

TEXT BOOK:

1. Arun K Pujari, Data Mining Techniques, Universities Press, Fourth Edition 2017.

REFERENCE BOOKS:

1. Insight Into Data Mining Theory And Practice By K.P.Soman Shyam Diwakar V.Vijay, PHI,Publication.
2. Data Warehousing, Data Mining And Olap By Alex Berson And Stephen J.Smith, TMH Publication.

HBCS17E03	E- COMMERCE	3	1	0	4
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UNIT: I **9 3 0**

Electronic Commerce Framework, Traditional vs. Electronic business applications, the anatomy of E-commerce applications.

UNIT: II **9 3 0**

Network infrastructure for E-Commerce - components of the I-way - Global information distribution networks - public policy issues shaping the I-way. The internet as a network infrastructure. The Business of the internet commercialization.

UNIT: III **9 3 0**

security and firewalls - client server network security - firewalls and network security - data and message security - encrypted documents and electronic mail.

UNIT: IV **9 3 0**

Electronic Commerce and world wide web, consumer oriented E-commerce, Electronic payment systems, Electronic data interchange (EDI), EDI applications in business ,EDI and E-commerce EDI implementation.

UNIT: V **9 3 0**

Intraorganizational Electronic Commerce supply chain management Electronic Commerce catalogs, Document Management and digital libraries

Total Number of Periods : 60

TEXT BOOK:

1. R. Kalakota and A. B. Whinston, Frontiers of Electronic Commerce, Addison Wesley, 1997.

REFERENCE BOOKS:

1. R.Kalakota and A.B.Whinston, Readings in Electronic Commerce, Addison Wesley, 1997.
2. David Kosiur, Understanding Electronic Commerce, Microsoft Press, 1997.
3. Soka, From EDI to Electronic Commerce , McGraw Hill, 1995.
4. Saily Chan, Electronic Commerce Management, John Wiley, 1998.

HBCF17E02	EVIDENCE MANAGEMENT	3	1	0	4
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UNIT I DIGITAL EVIDENCE AND COMPUTER CRIME 9 3 0

Digital evidence- increasing awareness – challenging aspects- following and challenging cyber trail- Computer crime investigation- evolution of investigative tools language of computer crime- role of computers in crime

UNIT II INVESTIGATIVE PROCESS 9 3 0

Role of digital evidence- Investigative methodology: accusation or incident alert, assessment of worth, incident crime scene protocols, identification or seizure, preservation, recovery, harvesting, reduction, organization and search, analysis, reporting, persuasion and testimony

UNIT III INVESTIGATIVE RECONSTRUCTION 9 3 0

Equivocal Forensic Analysis: temporal, relational and functional analysis-Victimology-crime scene characteristics-evidence dynamics and introduction of error- reporting

UNIT IV DIGITAL EVIDENCE IN THE COURTROOM 9 3 0

Admissibility- authenticity and reliability certainty scale- best evidence direct versus circumstantial evidence- hearsay-scientific evidence- presenting digital evidence

UNIT V CYBERSTALKING AND EVIDENCE HANDLING 9 3 0

Cyberstalkers operation- investigating cyberstalking- digital evidence as alibi- Digital evidence handling: handling guidelines, examination guidelines

Total Number of Periods : 60

TEXT BOOK:

1. 'Digital Evidence and Computer Crime Forensic science, Computers and Internet' - EoghanCasey – Elsevier Academic Press –Third Edition

REFERENCE BOOKS:

1. A Electronic Discovery and Digital Evidence in a Nut Shell-Shira A Scheindlin, Daniel J Capra,The Sedona Conference-Academic Press-Third Edition

HBCS17E07	MOBILE APPLICATION DEVELOPMENT	3	1	0	4
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UNIT I: INTRODUCTION **9 3 0**

Introduction to Mac, XCode, Objective C- Mobile Devices Profiles - Mobile Software - Options for development

UNIT II : INTRODUCTION TO SOFTWARE AS A SERVICE **9 3 0**

Service Oriented Computing Examples- Google Maps- Amazon Web Services

UNIT III : USER INTERFACE (UI) DEVELOPMENT FOR MOBILE APPS **9 3 0**

UI elements views-User Interface Frameworks

UNIT IV : GOOGLE ANDRIOD PLATFORM **9 3 0**

The Eclipse Simulator - Google Application Architecture - Event based programming

UNIT V : APPLE IPHONE PLATFORM **9 3 0**

UIKit for Interfaces - Event Handling - Layer Animation

Total Number of Periods: 60

TEXT BOOK:

1. Ed Burnette (2009) Hello, Android: Introducing Google's Mobile Development Platform, Pragmatic Bookshelf
2. Marko Gargenta (2011) Learning Android ,O'Reilly Media.

REFERENCE BOOKS:

1. Richard Rodger (2012) Beginning Mobile application development in the cloud, Wrox Publication

HBCF17E03	MALWARE DETECTION AND ANALYSIS	3	1	0	4
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Unit : I**9 3 0**

Malware Analysis and Reverse Engineering - Types of Malware Analysis - Purpose of Malware Analysis - Limitations of Malware Analysis - Malware Analysis Process - Effective Malware Analyst

Unit : II**9 3 0**

Malware Taxonomy - Malware Classes: Infectors, Images Network worms, Images Trojan horses, Images Backdoors, Images Remote-access Trojans, Images Information stealers, Images Ransomware, Images Scareware, Images Fakeware, Images Greyware

Unit : III**9 3 0**

Malware Deployment - Malware infection vectors- types : Physical media, Images E-mails, Instant messaging and chat, Social networking, Universal resource locator (URL) links, File shares, Software vulnerabilities- Potential infection vectors

Unit : IV**9 3 0**

Protective Mechanisms - States of malware: static, dynamic- Static mechanism : Entry-point obscuring, Basic malware encryption, Polymorphism, Metamorphism, Anti-reversing- Dynamic mechanism : Anti-debugging: Anti-sandboxing, Environment lock, Anti-AV scanning, Network behavior protection

Unit : V**9 3 0**

Malware Dependencies - Dependency types : Environment: Operating system, System settings, Virtualization – Program – Timing- Event- User: Compromise accomplice, Roles and access-File

Total Number of Periods: 60

TEXT BOOK:

1. “Advanced Malware Analysis” Christopher Elisan, McGraw-Hill, 2015

REFERENCE BOOKS:

1. “Practical Malware Analysis” Michael Sikorski; Andrew Honig, No Starch Press, 2012
2. “Cuckoo Malware Analysis” Digit Oktavianto; Iqbal Muhandianto, Packt Publishing, 2013

HBCS17E09	OPEN SOURCE SOFTWARE	3	1	0	4
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UNIT I **9 3 0**

OPEN SOURCE-Introduction: Open Source – Open Source vs. Commercial Software – What is Linux? - Free Software – Where I can use Linux? Linux Kernel – Linux Distributions

UNIT II **9 3 0**

LINUX -Introduction: Linux Essential Commands - File system Concept - Standard Files - The Linux Security Model - Vi Editor - Partitions creation - Shell Introduction - String Processing - Investigating and Managing Processes - Network Clients - Installing Application

UNIT III **9 3 0**

APACHE -Introduction - Apache Explained - Starting, Stopping, and Restarting Apache - Modifying the Default Configuration - Securing Apache - Set User and Group - Consider Allowing Access to Local Documentation - Don't Allow public_html Web sites - Apache control with .hatches

UNIT IV **9 3 0**

MySQL-Introduction to MY SQL - The Show Databases and Table - The USE command - Create Database and Tables - Describe Table - Select, Insert, Update, and Delete statement - Some Administrative detail - Table Joins - Loading and Dumping a Database. 27

UNIT V **9 3 0**

PHP -PHP Introduction- General Syntactic Characteristics - PHP Scripting - Commenting your code - Primitives, Operations and Expressions - PHP Variables - Operations and Expressions Control Statement - Array - Functions - Basic Form Processing - File and Folder Access - Cookies - Sessions - Database Access with PHP - MySQL - MySQL Functions - Inserting Records - Selecting Records - Deleting Records - Update Records.

Total Number of Periods: 60

TEXT BOOK:

1. "Open Source Web Development with LAMP using Linux, Apache, MySQL, Perl and PHP", James Lee and Brent Ware, Dorling Kindersley (India) Pvt. Ltd, 2008

REFERENCE BOOK:

1. "Setting Up LAMP: Getting Linux, Apache, MySQL & PHP and working Together", Eric Rosebrock, Eric Filson, Published by John Wiley and Sons, 2004.