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. (COMPUTER SCIENCE)

Curriculum and Syllabus

Regulation – 2017

B.Sc. (Computer Science) Curriculum

Semester - I - Theory						
Sub. Code	**Subject Name**	**L**	**T**	**P**	**C**	**Page No.**
HBTA17001/18001	Tamil - I / Hindi - I / French - I	3	0	0	3	
HBEN17001/18001	English - I	3	0	0	3	
HBMA17A01/18A01	Allied Mathematics - I	3	1	0	4	
HBCS17G01	Fundamentals of Computer and Internet	3	1	0	4	
HBCS17G02	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.**
HBTA17002/18002	Tamil - II / Hindi - II / French - II	3	0	0	3	
HBEN17002/18002	English - II	3	0	0	3	
HBMA17A02/18A02	Allied Mathematics - II	3	1	0	4	
HBCS17G03	Object Oriented Programming	3	1	0	4	
HBCS17G04	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.**
HBPH17A03	Allied Electronics - I	3	1	0	4	
HBCS17G05	Programming in Java	3	1	0	4	
HBCS17G06	Operating System	3	1	0	4	
HBCS17G07	Computer Architecture and Organization	3	1	0	4	
HBCS17G08	Computer Networks	3	1	0	4	
Practical						
HBCS17L03	Programming in Java Lab	0	0	6	2	
HBMG	Soft Skill - I	0	0	6	2	
	3rd Semester Credits				**24**	

Semester - IV - Theory						
Sub. Code	**Subject Name**	**L**	**T**	**P**	**C**	**Page No.**
HBPH17A04	Allied Electronics - II	3	1	0	4	
HBCS17G09	Data Base Management System	3	1	0	4	
HBCS17G10	Visual Basic	3	1	0	4	
HBCS17G11	Software Engineering	3	1	0	4	
Practical						
HBCS17L04	Visual Basic Lab	0	0	6	2	
HBCS17L05	DBMS Lab	0	0	6	2	
	Soft Skill - II	0	0	6	2	
	4th Semester Credits				**22**	

Semester - V – Theory						
Sub. Code	**Subject Name**	**L**	**T**	**P**	**C**	**Page No.**
HBCS17G12	C# Dot Net	3	1	0	4	
HBCS17G13	Web Design	3	1	0	4	
HBCS17EXX	Elective - I	3	1	0	4	
	Environmental Studies	3	0	0	3	
HBCS17EYY	Elective - II	3	1	0	4	
Practical						
HBCS17L06	C# Dot Net Lab	0	0	6	2	
HBCS17L07	Web Design Lab	0	0	6	2	
	5th Semester Credits				**23**	

Semester - VI – Theory						
Sub. Code	**Subject Name**	**L**	**T**	**P**	**C**	**Page No.**
	Enterpreneurial Development	3	0	0	3	
HBCS17D14	Fundamentals of Cloud Computing	3	1	0	4	
HBCS17EZZ	Elective - III	3	1	0	4	
Practical						
HBCS17P01	Project	0	0	12	10	
	6th Semester Credits				**21**	

Electives						
Sub. Code	**Subject Name**	**L**	**T**	**P**	**C**	**Page No**
HBCS17E01	Multimedia Systems	3	1	0	4	
HBCS17E02	User Interface Design	3	1	0	4	
HBCS17E03	E- Commerce	3	1	0	4	
HBCS17E04	Data Mining	3	1	0	4	
HBCS17E05	System Analysis and Design	3	1	0	4	
HBCF17C02	Cryptography	3	1	0	4	
HBCS17E07	Mobile Application Development	3	1	0	4	
HBCS17E08	Software Testing	3	1	0	4	
HBCS17E09	Open Source Software	3	1	0	4	

Credit Requirements

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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B.B.A., BCA., B.Sc., B.Com (முதல் பருவம்

நோக்கம்:

- வாய்மொழி இலக்கியத்தையும் செய்யுள் இலக்கியத்தையும் அறிந்து கொள்ளல்
- சிறுகதை மரபினைப்புரிந்து 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. தமிழ்க்காதல் - பாரதிதாசன்
7. தமிழ்வளர்ச்சி – பாரதிதாசன்
8. எந்நாளோ? – பாரதிதாசன்
9. ஆறு தன் வரலாறு கூறுதல் - கவிமணி தேசிய விநாயகம் பிள்ளை

அலகு – 2

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

துணை பேராசிரியர் புதுப்பிக்க அனுப்பப்படுகிறது.

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-600 095

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, வலிமிகும் இடங்கள், வலிமிகா இடங்கள்.

அலகு – 5

1. தமிழ்க் கவிதையின் தோற்றமும் வளர்ச்சியும் (மரபுக்கவிதை, புதுக்கவிதை)
2. தமிழ்ச்சிறுகதையின் தோற்றமும் வளர்ச்சியும்

மரபுத் தொடர்கள், பொருந்தியசொல் தருதல் கலைச் சொற்கள், நேர்காணல்

மேற்பார்வை நூல்கள்:

Vice Chancellor
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Periyar E.V.R. Road,

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

2013 – சென்னைப் பல்கலைக்கழக வெளியீடு

பொது இலக்கணம்.

da

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BHI13001 **HINDI – I** 3 0 0 3

Prose, Administrative Hindi and Grammer.

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. Grammer(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. grammer & 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

13/06/2017

S. MANINEGACAI

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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**

HEAD
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

HEAD DEPARTMENT OF ENGLISH

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/infinitive-gerund/
12. www.idiomsite.com/

HEAD, DEPARTMENT OF ENGLISH
SR EDU... ...STITUTE
SR... ...ACADEMY
Chennai ...

HBCS17G01	FUNDAMENTALS OF COMPUTER AND INTERNET	3	1	0	4

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.

HBCS17G02	FUNDAMENTALS OF PROGRAMMING	3	1	0	4

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

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.

டாக்டர். எம்.ஜி.ஆர்.
கல்வி மற்றும் ஆராய்ச்சி நிறுவனம்
பல்கலைக்கழகம்
அடையாளம்பட்டு, 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 தூது

அலகு~III

7. திருக்குற்றாலக் குறவஞ்சி
8. முக்கூடற்பள்ளு
9. இயேசுபிரான் பிள்ளைத்தமிழ்

அலகு~IV

10. நளவெண்பா
11. சீறாப்புராணம்

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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 இல்க்கணம்

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

(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 lieus, 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

12/06/2017

S. MANINEGALAI

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

HEAD, DEPARTMENT OF ENGLISH
DR.M.G.R 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	W.R. Inge
2. Disaster Management	B.M. Hegde
3. If You are Wrong Admit it	Dale Carnegie

Unit II – POETRY- For Detailed Study

1. Psalm of Life	H.W. Longfellow
2. Anthem for Doomed Youth	Wilfred Owen
3. Street Cries	Sarojini Naidu

Unit III – SHORT STORY

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

Unit IV - DRAMA

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

HEAD, DEPARTMENT OF ENGLISH
M.G.R EDUCATIONAL & RESEARCH INSTITUTE
UNIVERSITY
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.Saradá, 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/

HEAD, DEPARTMENT OF ENGLISH
Chennai

HBCS17G03	OBJECT ORIENTED PROGRAMMING	3	1	0	4

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: Simple If, If...Else, Switch-Case, 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.

HBCS17G04	DATA STRUCTURES	3	1	0	4

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 BOOK:

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

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++.

	ALLIED ELECTRONICS-I	3	1	0	4

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.

HBCS17G05	PROGRAMMING IN JAVA	3	1	0	4

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, JPannel – 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.

HBCS17G06	OPERATING SYSTEM	3	1	0	4

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:

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

HBCS17G07	COMPUTER ARCHITECTURE AND ORGANIZATION	3	1	0	4

UNIT: I **9 3 0**

Basic Structure of Computers: Introduction–Computer types–Functional Units: Input, Output, Memory, Control unit and Arithmetic and Logic Unit–Basic Operational Concepts – Bus Structures: Single, Multiple Bus Structure

UNIT: II **9 3 0**

Software Performance: Processor Clock, Clock Rate and Performance Measurement Memory Locations and Addresses – Memory operations – Instruction and Instruction Sequencing – Addressing modes – Assembly Language

UNIT: III **9 3 0**

Control Unit: Hardwired Control –Micro programmed Control – Comparison between Hardwired and Micro programmed Control – Instruction Pipelining: Hazards in Instruction Pipelining, Influence on Instruction sets. ALU and its operations

UNIT: IV **9 3 0**

Memory System I: Functions of Memory – Characteristics of memory – Types of Memory – Primary or Main memory: Random Access Memory and its types, Read Only Memory and its types, Cache memory and its design.

UNIT: V **9 3 0**

Memory System II: Secondary memory: Magnetic Disk: Floppy Disk, Hard Disk – Basics of RAID – Optical Memory: CD, DVD – Magnetic Tapes: Applications, Advantages and Disadvantages

Total Number of Periods: 60

TEXT BOOK:

1. A.P.Godse, D.A.Godse, Computer Architecture, Technical Publications, Pune. First Edition 2010

REFERENCE BOOKS:

1. John P.Hayes, Computer Architecture and Organization, 3rd Edition, McGraw – Hill International Editions, 2012
2. C.V.Suresh Babu, Computer Architecture and Organization, Anniyappa Publications.

HBCS17G08	COMPUTER NETWORKS	3	1	0	4

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

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

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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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UNIVERSITY

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 L1

Unit IV **6 hours**

Reading and writing
Vocabulary-synonm, antonym, collocations, confused words, homonym, odd man out, words with correct spelling, avoid redundancy –Inferential comprehension (basede 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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DR.M.G.R. EDUCATIONAL & RESEARCH INSTITUTE
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Chennai - 600 095

	ALLIED ELECTRONICS-II	3	1	0	4

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.

HBCS17G09	DATABASE MANAGEMENT SYSTEM	3	1	0	4

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

HBCS17G10	VISUAL BASIC	3	1	0	4

UNIT: I **9 3 0**

Forms and Control: Customizing a Form - Writing Simple Programs-Toolbox-Creating Controls - Name Property-Command Button - Access Keys - Image Controls - Text Boxes -Labels Message - Boxes-Grid-Editing Tools-Variables-Data Types-String –Numbers.

UNIT: II **9 3 0**

Functions and Events: Displaying Information-Determinate Loops-Indeterminate Loops-Conditionals-Built-In Functions-Functions and Procedures.

UNIT: III **9 3 0**

Controls: Lists-Arrays-Sorting and Searching- Records-Control Arrays-Combo Boxes-Grid Control-Projects with Multiple forms- Do Events and Sub Main-Error Trapping- Active X Control.

UNIT: IV **9 3 0**

Menus: VB Objects-Dialogue Boxes-Common Controls-Menus-MDI Forms-Testing, Debugging and optimization-working with graphics-

UNIT: V **9 3 0**

Mouse Activity: Monitoring Mouse Activity-File Handling-File System Controls-File System Objects-COM/OLE-Automation- DLL Services-OLE Drag and Drop.

Total Number of Periods: 60

TEXT BOOK:

1. Gary Cornell-Visual Basic 6 from the Ground Up-Tata McGraw Hill, New Delhi, 2008

REFERENCE BOOKS:

1. Deitel & Deitel, T.R.Nieto, “Visual Basic 6, How to program”, Prentice Hall- 2006.
2. Steven Holzner, Visual Basic 6, Programming Black Book by Dream tech Press, 2009
3. Noel Jerke - Visual Basic 6(The Complete Reference)-Tata McGraw Hill-2005.

HBCS17G11	SOFTWARE ENGINEERING	3	1	0	4

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 - 8th edition, McGraw hill, 2015.

REFERENCE BOOK:

1. Ian Sonunerville Software Engineering - 10th Edition - Addison Wesley, 2016.

HBCS17L04	VISUAL BASIC LAB	0	0	6	2

Visual Basic

Any RDBMS package creates database and performing the operations given below using a Menu Driven program: Insertion, (b) Deletion, (c) Modification, (d) Generating a reports (Simple) for the Following Systems:

Program to develop an application for

1. Rolling a Die
2. Simple Calculator
3. Prime Number Tester
4. Pay Roll Processing
5. Electricity Bill Payment
6. Quiz Programming
7. Simple Animation
8. Factorial Number
9. Palindrome Number
10. Reverse Given Number

HBCS17L05	DBMS LAB	0	0	6	2

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

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

HBMG14L02 **L T P C**
0 1 1 2

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
Deemed to be University
CHENNAI-600 095

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

HEAD, DEPARTMENT OF ENGLISH

HBCS17G12	C# DOT NET	3	1	0	4

UNIT: I **9 3 0**

MS.NET Framework Introduction : .NET Framework - an Overview, Framework Components, Framework Versions, Types of Applications which can be developed using MS.NET, MS.NET Base Class Library, MS.NET Namespaces , MSIL / Metadata and PE files, The Common Language Runtime (CLR), Managed Code, MS.NET Memory Management / Garbage Collection , Common Type System (CTS), Common Language Specification (CLS), Types of JIT Compilers, Security Manager

UNIT: II **9 3 0**

C# Introduction: Developing Console Application- Introduction to Project and Solution in Studio, Entry point method – Main, Compiling and Building Projects , Compiling a C# program using command line utility CSC.EXE, **Language Basics**- Data types & Variables declaration, Reference Type and Value Type, Implicit and Explicit Casting, Casting between other data types, Boxing and Unboxing, Enum and Constant.

UNIT: III **9 3 0**

Introduction to Object Oriented Features: Object, Class, Relationship between Class and Object, Encapsulation, Inheritance, Namespace, Interface and Polymorphism, Exception Handling, Delegates

UNIT: IV **9 3 0**

Operators: Operator Overloading, Method Overloading, Control Statements, Working with Arrays, Structures, Working with Methods, Pass by value and by reference and out parameters

UNIT: V **9 3 0**

Working With Ado .Net:ADO.NET Architecture – ADO.NET Connected and Disconnected Models – XML and ADO.NET – Simple and Complex Data Binding– Data Grid View Class.

Total Number of Periods: 60

TEXT BOOKS:

1. Programming in C# – E. Balagurusamy, 5th Reprint, Tata McGraw Hill,3rd Edition,2010
2. Stephen C. Perry "Core C# and .NET", Pearson Education, 2006.

REFERENCE BOOKS:

1. Jesse Liberty, "Programming C# 4.0", Second Edition, O'Reilly Press, 6th Edition, 2010.
2. Robinson et al, "Professional C#", Third Edition, Wrox Press, 2004.
3. Herbert Scheldt, "The Complete Reference: C# 4.0", Tata McGraw Hill, 2010.
4. Thuan Thai and Hoang Q. Lam, ". NET Framework Essentials", Third Edition, O'Reilly, 2003.
5. Pro C# with .NET 3.0 – Andrew Troelsen, Special Edition, Dream tech Press, India, 2007.
6. S. Thamarai Selvi and R. Murugesan "A Textbook on C# ", Pearson Education, 2012.

HBCS17G13	WEB DESIGN	3	1	0	4

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

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,NewDelhi, (2006).

Approved in Biotech BOS Regd. no. 4

HBCS17L06	C# DOT NET LAB	0	0	6	2

1. Write a program to display addition, subtraction, multiplication and division of two number using console applications.
2. Program to display the addition using the windows application.
3. Write a program to convert input string from lower to upper and upper to lower case.
4. Write a program for simple calculator using windows application.
5. Write a program to work with forms using C#.NET.
6. Write a Program in C# to Check whether a String / number is Palindrome or not.
7. Write a program to reverse a given string using C#.
8. Write a program for windows application to compare & concatenate two strings.
9. Write a program for connectivity with Oracle database.
10. Write a program to access data source through ADO.NET.

HBCS17L07	WEB DESIGN LAB	0	0	6	2

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.

	ENTERPRENEURIAL DEVELOPMENT	L T P C

Unit – I Concept of Entrepreneurship

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

+

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 Opprtunities – 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 Governemnt in organisind 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, Georgraphic Concentration. Franchising / Dealership – Development of Women Entrepreneurship.

Books:

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

C.B. 5/6/17.

HBCS17G14	FUNDAMENTALS OF CLOUD COMPUTING	3	1	0	4

UNIT: I **9 3 0**

O**verview 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.

HBCS17P01	PROJECT	0	0	12	10

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

HBCS17E01	MULTIMEDIA SYSTEMS	3	1	0	4

UNIT: I **9 3 0**

Definition - Classification - MM application - MM H/w - MM s/w - CDROM - DVD.

UNIT: II **9 3 0**

MM Audio: Digital medium - Digital audio technology - sound cards - recording - editing - MP3 - MIDI fundamentals - Working with MIDI - audio file formats - adding sound to MM project.

UNIT: III **9 3 0**

MM TEXT: Text in MM - MM graphics: coloring - digital imaging fundamentals - development and editing - file formats - scanning and digital photography

UNIT: IV **9 3 0**

MM Animation: Computer animation fundamentals - Kinematics - morphing - animation s/w tools and techniques. MM Video: How video works - broadcast video standards - digital video fundamentals - digital video production and editing techniques - file formats.

UNIT: V **9 3 0**

MM Project: stages of project - MM skills - design concept - authoring - planning and costing – MM team

Total Number of Periods: 60

TEXT BOOKS:

1. Tay Vaughan- Multimedia making it work- Eighth Edition – TMH, New Delhi 2011. (Unit 1, 2 & 3)
2. Fred Halsall – Multimedia communications – Fourth Indian reprint, 2011 (unit 4 & 5)

REFERENCE BOOKS:

1. Multimedia Magic - S. Gokul revised and updated second edition – BPB, 2008.
2. Multimedia making it Work - Tay Vaughan 6th edition – TMH.

HBCS17E02	USER INTERFACE DESIGN	3	1	0	4

UNIT: I **9 3 0**

Introduction: Human – Computer Interface – Characteristics of Graphics Interface – Direct Manipulation Graphical System – Web User Interface – Popularity – Characteristic & Principles.

UNIT: II **9 3 0**

Human Computer Interaction : User Interface Design Process – Obstacles – Usability –Human Characteristic In Design – Human Interaction Speed – Business Functions –Requirement Analysis – Direct – Indirect Methods – Basic Business Functions – Designs Standards – System Timings .

UNIT: III **9 3 0**

Windows: Characteristics – Components – Presentation Styles – Types – Managements – Organizations – Operations – Web Systems – Device – Based Controls Characteristics –Screen – Based Controls – Operate Control – Text Boxes – Selection Control – Combination Control .

UNIT: IV **9 3 0**

Multimedia: Text For Web Pages – Effective Feedback - Guidance and Assistance – Internationalization – Accessibility – Icons – mage – Multimedia – Coloring.

UNIT: V **9 3 0**

Windows Layout – Test: Prototypes – Kinds Of Tests – Retest – Information Search – Visualization – Hypermedia – WWW- Software Tools.

Total Number of Periods: 60

TEXT BOOK:

1. Wilbent. O. Galitz, “The Essential Guide to User Interface Design”, John Wiley & Sons, 3rd edition, 2007.

REFERENCE BOOKS:

1. Ben Scheiderman, “Design the User Interface”, Pearson Education, 6th Edition, 2016.
2. Alan Cooper,” The Essential of User Interface Design”, Wiley – Dream Tech Ltd., 2002

HBCS17E03	E- COMMERCE	3	1	0	4

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.

HBCS17E04	DATA MINING	3	1	0	4

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- D**ECISION 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.

HBCS17E05	SYSTEM ANALYSIS & DESIGN	3	1	0	4

UNIT - I: FUNDAMENTALS OF SYSTEM DEVELOPMENT 9 3 0

System Concept – Characteristics – Elements of System – Types of System – Modern Approach to System Analysis and Design – System Development Life Cycle – Approaches to Improving Development – Tools for System Development – Succeeding as a System Analyst – Skills – Managing the Project.

UNIT - II: SYSTEM ANALYSIS 9 3 0

Determining System Requirements – Traditional Methods - Modern Methods – Radical Methods – Structuring System Requirements – Process Modeling – Data Flow Diagramming – Logic Modeling – Conceptual Data Modeling – E-R Modeling.

UNIT - III: SYSTEM DESIGN 9 3 0

System Implementation – Software Application Testing – Installation – Documentation – Training and Support – Organizational Issues in Systems Implementation – Maintaining Information System – Conducting System Maintenance.

UNIT - IV: IMPLEMENTATION AND MAINTENENCE 9 3 0

System Implementation – Software Application Testing – Installation – Documentation – Training and Support – Organizational Issues in Systems Implementation – Maintaining Information System – Conducting System Maintenance

UNIT - V: SABILITY AND MEASURING USER SATISFACTION 9 3 0

Usability Testing-User satisfaction test- A tool for analyzing user satisfaction –Unified Modeling Language (UML)- Case study: System Design: Application in Human Resource-Financial Applications

Total Number of Periods: 60

TEXT BOOK:

1. Jeffrey A. Hoffer, Joey F. George, Joseph S. Valacich, “Modern Systems Analysis and Design”, Seventh Edition, Prentice Hall, March 2013.

REFERENCES:

1. Ned Kock, “Systems Analysis & Design Fundamentals” Sage South Asia, May 2008.
2. Joseph S. Valacich, Jeffrey A. Hoffer, Joey F. George, “Essentials of System Analysis and Design”, Pearson Education, 6th Edition, 2015.
4. Rumbaugh et al, “Succeeding with Booch and Rambaugh Methods”, Addisson Wesley, second Edition, 1998.
5. Larman, C.,” Applying UML and Patterns. An introduction to Object-Oriented Analysis and Design”. Prentice-Hall PTR, 2002.

HBCF17G02	CRYPTOGRAPHY	3	1	0	4

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 BOOK:

1. William Stallings, "Cryptography and Network Security: Principles and practice", Pearson Education Inc., 7th Edition, 2016.

REFERENCES:

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

HBCS17E07	MOBILE APPLICATION DEVELOPMENT	3	1	0	4

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.

REFERENCES:

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

HBCS17E08	SOFTWARE TESTING	3	1	0	4

UNIT: I **9 3 0**

Building a Software Testing Strategy: Software Testing Design Techniques – Software Testing Tools and Selection of Test Automation Products – Software Testing Lifecycle and Software Testing Process

UNIT: II **9 3 0**

Testing Effort Estimation and Test Planning: Software Test Effort Estimation Technique – Pre-Development Testing Requirements and Design Phase – Best Practices in Program Phase Unit, System and Integration Testing

UNIT: III **9 3 0**

A Case Study on Acceptance Testing: Implementation an Effective Test Management Process – Building an Effective Test Organization – Performance Issues and Optimization Techniques

UNIT: IV **9 3 0**

Choosing a Load Testing Strategy: Dodging the Bullets – Validating Mission-Critical Server Software for Reliability – Probing the Blind Spot – Testing in Today's Business and Usability

UNIT: V **9 3 0**

Testing of Web-based Applications: Testing of Embedded Software System used in Aerospace Applications – Testing Application for Security – Testing Metrics, Best Practices and Benchmarks

Total Number of Periods: 60

TEXT BOOK:

1. "Software Testing Effective Methods, Tools and Techniques", Renu Rajani and Pradeep Oak, Tata McGraw-Hill, 2014

HBCS17E09	OPEN SOURCE SOFTWARE	3	1	0	4

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.