1901MA102	MATHEMATICS - I(Calculus and Linear Algebra)	L	T	P	C
	(CSE, IT)	3	2	0	4

Aim of the course:

- 1. To familiarize the students with differential calculus.
- 2.To develop the use of integration techniques that is needed by engineers for practical applications.
- 3.To familiarize the student with concepts of matrices. This is needed in many branches of engineering.
- 4.To make the students understand the idea of vector spaces and linear transformations.
- 5.To acquaint the student appreciate the purpose of using transforms to create a new domain of the matrix.

PREREQUISITES: BASIC MATHEMATICS

Module 1: Differntial Calculus

Curvature in Cartesian co-ordinates — Centre and radius of curvature — Circle of curvature-Evolutes and involutes.

Module 2: Integral Calculus

Double integration — Cartesian and polar coordinates — Change the order of Integration — Applications: Area of a curved surface using double integral — Triple integration in Cartesian coordinates — Volume as triple integral.

Module 3. Linear Algebra

Matrices, Vectors: addition and Scalar multiplication, matrix multiplication; Linear systems of equations, linear independence, rank of a matrix, determinants, Cramer's rule, inverse of a matrix, Gauss elimination and Gauss-Jordan methods.

Module 4: Vector Spaces

Vector Space, Linear Independence of Vectors, basis, dimesnsions; Linear Transformations (maps) range and kernel of a linear map, rank and nullity, Inverse of a linear transformation, rank nullity theorem, composition of linear maps, Matrix associated with a linear map.

Module 5: Matrices

System of Linear Equations; Symmetric, Skew-symmetric and orthogonal matrices - Eigen values and Eigen Vectors; Diagonalization of Matrices - Reduction of a quadratic form to a canonical form by orthogonal transformation.

COURSE OUTCOMES SKILL DEVELOPMENT

After completion of the course, the student will be able to

- CO1: Develop the evolutes and envelopes of given curves by means of radius and centre of curvature(K3)
- CO2: Determine the area and volume of a curve using double and triple integration
- CO3: Calculate the inverse and rank of a square matrix and Make use of Matrix Operations to solve the systems of linear equations
- CO4: Determine Vector spaces and subspaces using linear independence and span of a set of vectors, basis and dimension.
- CO5: Determine the nature of the matrix using Orthogonal Transformation.

TEXT BOOKS:

REFERENCES (BOOKS):

- 1. Veerarajan T., Engineering Mathematics for first year, Tata McGraw Hill Men Delhi, 2018.
- 2.G.B. Thomas and R.L. Finney, Calculus and Analytic Prometry/9th Edition/Pearson,

1901CH104	APPLIED CHEMISTRY IN INFORMATICS	L	T	P	C
1501011104	(for CSE&IT)	3	0	0	3

Aim of the course: Applied Chemistry in informatics course is designed to provide chemistry and its application to the Copmuter science and engineering students. The course is a combination of the theoretical concepts and application of the theoretical concepts of chemistry. It includes the study of applications of cell chemistry, material for computers, nano materials, polymers and chemistromatics as well as their theoretical parts. The course is designed very efficiently, specifically to support the computer science programme through chemistry.

PREREQUISITES: BASIC CHEMISTRY

CELL CHEMISTRY

Cell terminology Cell reactions - Conductors, insulators-Daniel cell-Difference between electrolytic cells and electrochemical cells. Reversible cells and irreversible cells -types-EMF and its applications - Nernst equation (derivation). Single electrode potential - Hydrogen electrode - Calomel electrode - Glass electrode - pH measurement using glass electrode.

MODULE II MATERIALS FOR COMPUTERS

Materials for <u>computers</u> and <u>communications</u> - crystalline semiconductors; metalized film conductors; dielectric films; solders; <u>ceramics</u> and polymers. <u>Electronic</u> materials, Semiconductor crystals - <u>Silicon</u>, III–V compounds, Photoresist films, <u>Packaging</u> materials, Photonic materials, <u>Crystalline</u> materials - Epitaxial layers, Optical <u>switching</u>, Optical transmission. NLO and OLED Materials.

MODULE III NANOTECHNOLOGY 9 Hours

Nanotechnology - Basics - distinction between molecules, nanoparticles and bulk materials; size-dependent properties. Nanoparticles: nano cluster, nano rod, nanotube(CNT) and nanowire. Synthesis: precipitation, chemical vapour deposition, laser ablation; Properties and applications.

MODULE IV POLYMERS 9 Hours

Introduction: Classification of polymers — Natural and synthetic; Thermoplastic and Thermosetting. Functionality — Degree of polymerization. Addition (Free Radical Mechanism) condensation and copolymerization. Conductive polymers- Fabrication of Plastics. Preparation properties and uses of Nylon66, Teflon, Epoxy resin.

MODULE V CHEMINFORMATICS

Cheminformatics-Definition — types of Bonds - Bond length- Bond angles - Torsional angles - Ramachandran plot for poly peptides with dihedral angles. Coordinates of atom in a molecule - Conformation - Cambridge structural database - Application— Linear format - SMILEYS notation — MOL format. Similarity search — Sub structure search - Structural keys — Finger print —structure based drug design — protein data bank- Application. Total: 45 Hour

CKILL DEVELOPMENT

COURSE OUTCOMES

After completion of the course, the student will be able to

COI: Describe electrode potential concepts using electro chemical principles S. RAMABALAN, N.E., Ph.D.,

CO2: Illustrate the semiconductor materials and its importance

CO3: Classify the nano materials used for different purposes

CO4: Describe the various polymer materials and its formation

CO5: Discuss the different chemoinformtics tools used

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PROGRAMMING FOR PROBLEM SOLVING L T P C (Common for all B.E./B.Tech Programme) 3 0 0 3

COURSE OBJECTIVES:

1. To prepare students to comprehend the fundamental concepts

2. To demonstrate fine grained operations in number system

To gain exposure in programming language using C

4. To develop programming skills using the fundamentals and basics of C Language

MODULE I INTODUCTION TO PROGRAMMING

9 Hours

Commonents of Computers and its Classifications- Problem Solving Techniques - Algorithm- Flowchart-Pseudo code - Program-Compilation - Execution

MODULE II BASICS OF C PROGRAMMING

9 Hours

Structure of C program - C programming: Data Types - Storage classes - Constants - Enumeration Constants - Keywords - Operators: Precedence and Associativity - Expressions - Input/output statements - Decision making statements - Switch statement - Looping statements - Pre-processor directives.

MODULE III

ARRAYS AND STRINGS

9 Hours

Introduction to Arrays: Declaration, Initialization - One dimensional array - Two dimensional arrays - Example Program: Matrix Operations - String operations

MODULE IV

FUNCTIONS AND POINTERS

9 Hours

Introduction to functions: Function prototype, function definition, function call, Built-in functions – Recursion – Example Program – Pointers – Pointer operators – Pointer arithmetic – Arrays and pointers – Array of pointers – Example Program: Sorting of names – Parameter passing: Pass by value, Pass by reference – Example Program: Swapping of two numbers and changing the value of a variable using pass by reference

MODULE V

STRUCTURES & FILE PROCESSING

9 Hour

Structure - Nested structures - Pointer and Structures - Array of structures - Example Program using structures and pointers - Dynamic memory allocation - Files - Types - File processing: Sequential access, Random access - Command line arguments

TOTAL: 45 HOURS

FURTHER READING:

Object Oriented Programming Approach.

COURSE OUTCOMES: EMPLOYABILITY

On the successful completion of the course, students will be able to

CO1: Describe basic concepts of computers

CO2. Paraphrase the operations of number system

CO3: Describe about basic concepts of C-Language

CO4: Understand the code reusability with the help of user defined functions

CO5: Analyze the structure concept, union, file management and preprocessor in C language

REFERENCES:

- Paul Deitel and Harvey Deitel, —C How to Program!, Seventh edition, Pearson Publication
- 2. Juneja, B. L and Anita Seth, -Programming in Cl, CENGAGE Learning India pvt. Ltd., 2011
- Pradip Dey, Manas Ghosh, —Fundamentals of Computing and Programming in Cl, First Edition, Oxford University Press, 2009.

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ENGLISH FOR ENGINEERS

(Common for all B.E./B.Tech. Programme)

Course Overview:

The course "English for Engineers" aims at honing the basic language skills of the learners. The course is a combination of introducing the rudiments of grammar and application of the principles in both verbal and written expressions. Students are trained to read and comprehend technical texts in the field of engineering. They are guided to acquire vocabulary building and write efficiently in technical writing .The course has been deftly planed and the learners are guided to use the LSRW skills for acquiring their technical knowhow and exhibiting their technical achievement by verbal and written mode. Students are encouraged to use English as a tool to get technical knowledge and display their attainment

SKILL DEVELOPMENT Objective:

- To teach the students to compose grammatically correct sentences for oral as well as written communication.
- To make the learners to interpret perfectly after paying attention to an audio on any theme.
- To expose the students to organize formal presentations effectively.
- To cultivate learners to explain the content of any written or visual material.
- · To help the learners to get trained in generate technical and non-technical documents with appropriate contents and context.
- To motivate the students to Monitor, analyse and adjust their own communication.

MODULE I FOCUS ON LANGUAGE (Vocabulary and Grammar)

9 Hours

Vocabulary - The Concept of Word Formation - Prefixes - Suffixes - Synonyms - Antonyms - Grammar -Articles- Preposition- Adjective-Adverb-Connectives -Tenses (present, past & future) - Conditional Clauses -Active voice -passive voice and Impersonal passive voice - Who-Questions.

MODULE II LISTENING SKILLS

9 Hours

Listening-Types of Listening -listening to short or longer texts- listening and Note taking- -formal and informal conversations- telephonic etiquettes- narratives from different sources. - Correlative verbal and nonverbal communication - listening to panel members (how to response to panel members after listening panel members) - listening to facing online interviews (or) interviews on video conferencing mode - listening webinars.

MODULE III SPEAKING SKILL

9 Hours

Speaking - Stress and intonation -Communication skills- Role of ICT in Communication, -Process of communication- oral presentation skills- verbal and non verbal communication-individual and group presentations- impromptu presentation- public speaking- Group discussion- speaking to the panel members (online interviews , video conferencing, online meeting and webinars,

MODULE IV READING SKILLS

9 Hours

Reading- Intensive Reading -Predicting the content -Comprehending general and technical articles -Cloze reading - Inductive reading- Short narrative and descriptions from newspapers - Skimming and scanning-reading and interpretation-critical reading interpreting and transferring graphical information-

MODULE V WRITING SKILLS

Writing- Precise writing -Summarizing- Interpreting visual texts (pie chart, bar chart, picture, advertisements etc., - Proposal writing (launching new units or department in a institution or industry & to get loan from bank) -Report writing (accident, progress, project, survey, Industrial visit)- job application-e- mail drafting- letter writing (permission, accepting and decaling)- e.mail drafting instructions -recommendations -checklist- uses of Print and electronic Pledia (internet, fax, mobile, interactive video and teleconferencing, computer) e-governance.

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1901GE151

ENGINEERING INTELLIGENCE I

(Common for all B.E./B.Tech. Programme)

L T P C

MODULEI

BEHAVIORAL CHANGES - TRANSITION OF COLLEGE

SCHOOL TO

6 Hours

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Vocabulary -The Concept of Word Formation - prefixes- suffixes- Synonyms - Antonyms - Grammar -Articles-Preposition- Adjective-Adverb-connectives -Tenses (present, past & future) - Sentence pattern-types of sentences -Active voice -passive voice and Impersonal passive voice - Who Ouestions.

MODULE II EXPOSURE TO INDIVIDUAL COMPETANCE

6 Hours

Listening-listening intently-arousing and sustaining interest-listening to short or longer texts- formal and informal conversations- telephonic etiquettes- narratives from different sources. -listening and Note takingcorrelative verbal and nonverbal communication-listening to TOEFL & IELTS programs-listening to Project presentation-listening to technical seminar and conferences.

MODULE III | CAREER PLANNING

6 Hours

Speaking - stress and intonation -persuasive speaking -Describing person, place and thing - sharing personal information - greetings -taking leave -Individual and Group Presentation-impromptu Presentation-public speaking-Group Discussion-project planning-facing viva voce and delivering project.

MODULE IV INTRODUCTION TO COMMUNICATION SKILLS

6 Hours

Reading- comprehending general and technical articles -cloze reading - inductive reading- short narrative and descriptions from newspapers - Skinnning and scanning-reading and interpretation-critical reading interpreting and transferring graphical information- sequencing of sentences-analytical reading on various Projects.

MODULE V COMMUNICATION EXERCISE-1

6 Hours

Writing- Precise writing -Summarizing- interpreting visual texts (pie chart, bar chart, picture - advertisements etc... - Proposal writing (launching new units or department in a institution or industry & to get loan from bank) -report writing (accident, progress, project, survey, Industrial visit)- job application-e- mail drafting- letter . writing (permission, accepting and decaling)-instructions -recommendations -checklist.

TOTAL: 30 HOURS

Course Outcomes:

SKILL DEVELOPMENT

At the end of the course, students will be able to

CO1: Apply their knowledge and skill to engineering field

CO2: Understand the value of individual competence

CO3: Apply their skill to career planning and team work

CO4: Illustrate verbal and non-verbal skills

CO5: Use various communication skill exercise to write and interpret the contents thi. Nagore - 611 002

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Nagapattinam (Dt) Tamii ivadu.

REFERENCES:

- Dr.P.Prasad(2012) "The Functional Aspects of COMMUNICATION SKILLS"; fifth Edition; S.K. Kataria
- Kalyana; (2015) "Soft Skill for Managers"; First Edition; Wiley Publishing Ltd.
- Aruna Koneru (2008) "Professional Communication"; Second edition; Tata McGraw-Hill Publishing Ltd.

B.E. Computer Science and Engineering E.G.S. Pillay Engineering College (Automonous) | Regulations 2019 Approved in IV Academic Council Meeting Held on 25.05.2019

Potal: Write a C program to implement Decision Making and Branching statements (Common for all B.E./B.Tech. Programme) COMPUTER PROGRAMMING LAB Write a C program to implement looping statements Write a C program to implement basic concepts EMPLOYABILITY Write a C program to implement Structures Write a C program to work with files in C Write a C program to implement pointers Write a C program to implement Strings Write a C program to implement Arrays Working with word and style sheets List of Experiments: 6 00

45 Hours

Paul Deitel and Harvey Deitel, -C How to Program!, Seventh edition, Pearson Publication References:

Juneja, B. L and Amita Seth, —Programming in Cl, CENGAGE Learning India pvt. Ltd., 2011

Pradip Dey, Manas Ghosh, -Fundamentals of Computing and Programming in Cl, First Edition. Oxford University Press, 2009

Anita Goel and Ajay Mittal, —Computer Fundamentals and Programming in Cl. Dorling Kindersley (India) Pvt. Ltd., Pearson Education in South Asia, 2011.

Byron S. Gottfried, "Schaum's Outline of Theory and Problems of Programming with C", McGraw-Hill Education, 1996.

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1901HSX51

COMMUNICATION SKILLS LAB

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(Common to all B.E./B.Tech. Programme)

List of Experiments:

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Activities on Fundamentals of Inter-personal Communication

Starting a conversation - responding appropriately and relevantly - using the right body language - Role Play in different situations & Discourse Skills- using visuals

Activities on Reading Comprehension

General Vs Local comprehension, reading for facts, guessing meanings from context, Scanning, skimming, and inferring meaning, critical reading & effective googling.

Activities on Writing Skills

Structure and presentation of different types of writing - letter writing/ Resume writing/e- correspondence/ Proposal writing/Technical report writing/ Portfolio writing - planning for writing- improving one's writing.

Activities on Presentation Skills

Oral presentations (individual and group) through JAM sessions / seminars / PPTs and written presentations through posters/ projects/ reports/ e-mails/ assignments etc. - creative and critical thinking.

Activities on Soft Skills

Dynamics of group discussion, intervention, summarizing, modulation of voice, body language, relevance, fluency and organization of ideas and rubrics for evaluation-Concept and process, pre- interview planning, opening strategies, answering strategies, interview through tele-conference & video-conferencing and Mock Interviews-Time management-stress management -paralinguistic features- Multiple intelligences - emotional intelligence - spiritual quotient (ethics) - intercultural communication - creative and critical

Total:

. Raman, Meenakshi and Sangeetha Sharma, "Technical Communication: Principles and Practice", Oxford University Press, New Delhi, 2011. References:

Sudha Rani, D., "Advanced Communication Skills Laboratory Manual", Pearson Education 2011.

Paul V. Anderson, "Technical Communication", Cengage Learning pvt. Ltd. New Delhi, 2007 "English Vocabulary in Use series", Cambridge University Press 2008.

"Management Shapers Series", Universities Press (India) Pvt Ltd., Himayatnagar, Hyderabad 20008.

Rizvi and Ashraf M., "Effective Technical Communication", Tata McGraw Hill, New Delhi. 2005 Jones, D, "The Pronunciation of English", CUP, . Cambridge, 2002

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ENGINEERING CHEMISTRY LAB

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(Common for all B.E./B.Tech. Programme) SKILL DEVELOPMENT

List of Experiments:

Determination of total temporary & permanent hardness of water py EDTA method

Determination of strength of given hydrochloric acid using pH meter

Estimation of iron content of the given solution using potentiometer

Estimation of sodium present in water using flame photometer

Corrosion experiment - weight loss method

Determination of molecular weight of a polymer by viscometer method 6

Conductometric titration of strong acid Vs strong Base

Estimation of dissolved oxygen in a water sample/sewage by Winkler's method 00

Companson of alkalimities of the given water samples

Determination of concentration of unknown colored solution using spectrophotometer

Determination of percentage of copper in alloy

Determination of ferrous iron in cement by spectrophotometry method

Adsorption of acetic acid on charcoal

14. Determination the flash point and fire point of a given oil using pen skyMartine closed cup

apparatus

15. Determination the calonific value of solid fuels

Determination the structural of the compound using chemo software.

45 Hours Total:

References:

- Furniss B.S. Hannaford A.J. Smith P.W.G and Tatchel A.R., "Vogel"s Textbook of practical organic chemistry", LBS Singapore (1994).
 - Jeffery G.H., Bassett J., Mendham J.and Denny vogel"s R.C., "Text book of quantitative analysis chemical analysis"; ELBS 5th Edn. Longman, Singapore publishers, Singapore, 1996
 - Daniel R. Palleros, "Experimental organic chemistry" John Wiley & Sons, Inc., New Yor (2001). Kolthoff I.M., Sandell E.B. et al. "Quantitative chemical analysis", Mcmillan, Madras 1980 लं चं

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1901MA202

ENGINEERING MATHEMATICS-II

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Aim of the course: To enable the students by studying various aspects of Probability and Statistics, such as, one dimensional random variables, two dimensional random variables, testing of hypothesis, design of experiments to apply for various concepts of Information Technology and Computer Science Engineering.

PREREQUISITES: Statistics and Probability

COURSE CONTENTS

Probability: Probability- Theorems on Probability- Conditional Probability - Baye's Theorem- Discrete and community random variables - Moments - Moment generating functions - Real Time Problems

Theoretical Distribution: Discrete Distributions: Binomial, Poisson, Geometric - Continuous Distributions: Uniform, Exponential, Normal distributions- Application of Distribution in Engineering Problems

Two - Dimensional random variables: Joint distributions - Marginal and conditional distributions - Covariance - Correlation and Linear regression-Rank Correlation.

Applied Statistics: Measures of Central Tendency — Measures of Dispersion - Curve fitting by the method of least squares- fitting of straight lines, second degree parabolas and more general curves.

Testing of Hypothesis: Test of significance: Large sample test for single proportion, difference of proportions, single mean, difference of means, and difference of standard deviations. Small samples: Test for single mean, difference of means, test for ratio of variances - Chi-square test for goodness of fit and independence of attributes.

Total Hours: 60

COURSE OUTCOMES:

SKILL DEVELOPMENT

Upon completion of this course, students will be able to

CO1: Apply the parameters of unpredictable experiments using probability concepts.

CO2: Construct probabilistic models for observed phenomena through discrete and continuous distributions.

CO3: Associate the random variables, by designing joint distribution and correlate the random variables.

CO4: Make use of the concept of testing of hypothesis for small and large samples

CO5: Make use of the concept of classification of design of experiments in optimization problems REFERENCES BOOKS:

Erwin Kreyszig, Advanced Engineering Mathematics, 9th Edition, John Wiley & Sons, 2006.

 P. G. Hoel, S. C. Port and C. J. Stone, Introduction to Probability Theory, Universal Book Stall, 2003 (Reprint).

3. S. Ross, A First Course in Probability, 6th Ed., Pearson Education India, 2002.

- 4. W. Feller, An Introduction to Probability Theory and its Applications, Vol. 1, 3rd Ed., Wiley, 1968.
- N.P. Bali and Manish Goyal, A text book of Engineering Mathematics, Laxmi Publications, Reprint, 2010.

6. B.S. Grewal, Higher Engineering Mathematics, Khanna Publishers, 35th Edition, 2000.

7. Veerarajan T., Engineering Mathematics (for semester III), Tata McGraw-Hill, New Delhi, 2010.

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E.G.S. Pillay Engineering College, Thethi, Nagore - 611 002. Nagapattinam (Dt) Tamil Nadu. 1901PH201 PHYSICS FOR INFORMATION SCIENCE L T P C 3 0 0 3

Aim: To make students understand the semiconductor physics and their applications in computer science and engineering

MODULEI

ELECTRONIC MATERIALS

9 Hours

Free electron theory, Density of states and energy band diagrams, Kronig-Penny model (to introduce origin of band gap), Energy bands in solids, E-k diagram, Direct and indirect bandgaps, Types of electronic materials: metals, semiconductors, and insulators, Occupation probability, Fermi level.

MODULE II SEMICONDUCTORS

9 Hours

Intrinsic and extrinsic semiconductors, Dependence of Fermi level on carrier-Concentration and temperature (equilibrium carrier statistics), Carrier generation and recombination, Carrier transport: diffusion and drift, p-n junction, Metal-semiconductor junction (Ohmic and Schottky).

MODULE III

MAGNETIC PROPERTIES OF MATERIALS

9 Hours

Magnetic dipole moment - magnetic permeability and susceptibility - diamagnetism - paramagnetism - ferromagnetism - ferromagnetism - Ferromagnetism: origin and exchange interaction-saturation magnetization and Curie temperature - Domain Theory- M-H behaviour - Hard and soft magnetic materials - examples and uses - Magnetic principle in computer data storage - Magnetic hard disc (GMR sensor).

MODULE IV

OPTICAL PROPERTIES OF MATERIALS

9 Hours

Classification of optical materials – carrier generation and recombination processes - Absorption emission and scattering of light in metals, insulators and semiconductors (qualitative approach only) - photo current in a P-N diode – solar cell - LED – Organic LED – Laser diodes – Optical data storage techniques.

MODULE V

NANO DEVICES

9 Hours

Electron density in bulk material - Size dependence of Fermi energy - Quantum confinement - Quantum structures - Density of states in quantum well, quantum wire and quantum dot structure - Band gap of nanomaterials - Tunneling: single electron phenomena and single electron transistor - Quantum dot laser.FET from SWNT- Carbon nanotubes: Properties and applications.

TOTAL: 45 HOURS

COURSE OUTCOMES: SKILL DEVELOPMENT

Upon completion of this course, students will be able to

CO1: Apply the parameters of unpredictable experiments using probability concepts.

- CO2: Construct probabilistic models for observed phenomena through discrete and continuous distributions.
- CO3: Associate the random variables, by designing joint distribution and correlate the random variables.
- CO4: Make use of the concept of testing of hypothesis for small and large samples
- CO5: Make use of the concept of classification of design of experiments in optimization problems REFERENCES:
 - J. Singh, Semiconductor Optoelectronics: Physics and Technology, McGraw-Hill Inc. (1995).
 - 2. B. E. A. Saleh and M. C. Teich, Fundamentals of Photonics, John Wiley & Sons, Inc., (2007).
 - S. M. Sze, Semiconductor Devices: Physics and Technology, Wiley (2008).

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1901GEX01 BASIC ELECTRICAL AND ELECTRONICS ENGINEERING C 3 3

COURSE OBJECTIVES:

- 1. To introduce basic electrical terminologies and laws
- To impart knowledge on solving series and parallel circuits
- To introduce about the three phase system.
- 4. To explain the working principle of dc and ac machines, power plants
- 5. To familiarize about basic electronic components, circuits, transducers, digital logic and communication systems

INTRODUCTION TO DC AND AC CIRCUITS

Introduction to DC and AC circuits: Ohms law - Kirchhoff's laws - Mesh analysis - Nodal analysis - Generation of AC waveforms - Analysis of R-L, R-C, R-L-C circuits - Introduction to three phase systems - Types of

MODULEII

ELECTRICAL MACHINES

6 Hours

Electrical Machines: DC Generator, DC Motor, Transformer, Induction Motor: Working principle, construction and applications.

MODULEIII | MEASURING INSTRUMENTS

6 Hours

Measuring instruments: Classification of instruments; Voltmeter, Ammeter, Wattmeter, Energy meter, Multimeter, CRO: Principles and operation.

SEMICONDUCTOR DEVICES MODULETV

7 Hours

Semiconductor devices: V-I characteristics of PN junction diode and Zener diode; Rectifiers - Half wave and full wave rectifiers; BJT - configurations; Amplifiers & Oscillators: classification, operation and applications; SCR: Construction and V-I characteristics; Basic power converters (Block diagram approach only).

MODULEV DIGITAL SYSTEMS

6 Hours

Digital systems: Boolean algebra - Reduction of Boolean expressions - De-Morgan's theorem - Logic gates -Implementation of Boolean expressions.

MODULEVI COMMUNICATION SYSTEMS

6 Hours

Communication Systems: Model of communication system - Analog and digital, Wired and wireless channel - Block diagram of various communication systems - Microwave, satellite, optical fiber and cellular mobile system.

MODULEVII ELECTRICAL SAFETY AND WIRING

Electrical safety and wiring: Safety measures in electrical system - Safety devices - types of wiring - Wiring accessories- staircase, fluorescent lamps and corridor wiring - Basic principles of earthing - Types of earthing - layout of generation, transmission and distribution of power (Single line diagram).

TOTAL: 45 HOURS

COURSE OUTCOMES: ENTREPRENEURSHIP/ EMPLOYABILITY | SKILL DEVELOPMENT

On the successful completion of the course, students will be able to

CO1: Remember the basic laws and fundamental concepts related to electrical, electronics and communication engineering

CO2: Apply basic concepts to solve problems in DC and AC circuits

CO3: Recall the principle of operation of DC & AC machines and power plants

CO4: Summarize the Boolean algebra and digital logic gates

CO5: Elucidate the characteristics of diode, BJT and applications of amplifiers and oscillates RAMABALAN, M.E., Ph.O., PRINCIPAL

CO6: Explain the operation of functional blocks of various communication systems REFERENCES:

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1. Smarajit Ghosh, "Fundamentals of Electrical and Electronics Engineering", 2nd (1997), Nagaratinam (De) Tamin Nagara Edition, PHI Learning, 2010.

R. Muthusubramaniam, S. Salaivahanan and K.A. Mureleedharan, "Basic Electrical Electronics and Computer Engineering", Tata McGraw Hill, 2004.

3. D.P. Kothari and I.J. Nagrath, "Theory and Problems of Basic Electrical Engineering", PHI learning,

1901GEX02

ENGINEERING GRAPHICS

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COURSE OBJECTIVES:

- To develop in students, graphic skills for communication of concepts, ideas and design of Engineering products.
- 2. To expose them to existing national standards related to technical drawings

CONCEPTS AND CONVENTIONS (Not for Examination)

5 Hours

Importance of graphics in engineering applications — Use of drafting instruments — BIS conventions and specifications - Size, layout and folding of drawing sheets - Lettering and dimensioning

MODULEII PLANE CURVES AND FREE HAND SKETCHING

Basic Geometrical constructions, Curves used in engineering practices: Conics - Construction of ellipse, parabola and hyperbola by eccentricity method - Construction of cycloid - construction of involutes of square and circle - Drawing of tangents and normal to the above curves.

Visualization concepts and Free Hand sketching: Visualization principles -Representation of Three-Dimensional objects - Layout of views- Free hand sketching of multiple views from pictorial views of Objects.

MODULEIII PROJECTION OF POINTS, LINES AND PLANE SURFACES

9 Hours

Orthographic projection- principles-Principal Planes-First angle projection-projection of points. Projection of straight lines (only First angle projections) inclined to both the principal planes - Determination of true lengths and true inclinations by rotating line method and traces. Projection of planes (polygonal and circular surfaces) inclined to both the principal planes by rotating object method.

MODULEIV PROJECTION OF SOLIDS

9 Hours

Projection of simple solids like prisms, pyramids, cylinder and cone when the axis is inclined to one of the principal planes by rotating object method.

MODULE V PROJECTION OF SECTIONED SOLIDS AND DEVELOPMENT OF 9 Hours

Sectioning of above solids in simple vertical position when the cutting plane is inclined to the one of the principal planes and perpendicular to the other - obtaining true shape of section. Development of lateral surfaces of simple and sectioned solids - Prisms, pyramids cylinders and cones.

MODULE VI ISOMETRIC AND PERSPECTIVE PROJECTIONS

9 Hours

Principles of isometric projection - isometric scale -Isometric projections of simple solids and truncated solids - Prisms, pyramids, cylinders, cones- combination of two solid objects in simple vertical positions and miscellaneous problems. Perspective projection of simple solids-Prisms, pyramids and cylinders by visual ray method.

TOTAL: 45+5 HOURS

COURSE OUTCOMES: SKILL DEVELOPMENT

On the successful completion of the course, students will be able to

CO1: Perform free hand sketching of basic geometrical constructions and multiple views of objects.

CO2: Do orthographic projection of lines and plane surfaces.

CO3: Draw projections and solids and development of surfaces.

CO4: Prepare isometric and perspective sections of simple solids.

CO5: Demonstrate computer aided drafting

REFERENCES:

Dr. S. RAMABALAN, M.E., Ph.D., PRINCIPAL

1. Gopalakrishna K.R., "Engineering Drawing" (Vol. I&II combined), Subhas States. Pillay Engineering College,

- Thethi, Nagore 611 002. 2. Luzzader, Warren J. and Duff John M., "Fundamentals of Engineering Drawing Watth at (Dt) Tamil Nadu. introduction to Interactive Computer Graphics for Design and Production, Eastern Economy Edition, Prentice Hall of India Pvt. Ltd., New Delhi., 2005.
- Shah M.B., and Rana B.C., "Engineering Drawing", Pearson, 2nd Edition, 2015.
- 4. Venugopal K. and Prabhu Raja V., "Engineering Graphics", New Age International (P) Limited

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1901GE201 ENGINEERING EXPLORATION L T P C 2 0 0 2

COURSE OBJECTIVES:

Skile DEVELOPMENT

- Build mindsets & foundations essential for designers
- Learn about the Juman-Centered Design methodology and understand their real-world applications
- Use Design Thinking for problem solving methodology for investigating ill-defined problems.
- Undergo several design challenges and work towards the final design challenge
- Apply Design Thinking on the following Streams to

Project Stream 1: Electronics, Robotics, IOT and Sensors

Project Stream 2: Computer Science and IT Applications

Project Stream 3: Mechanical and Electrical tools

Project Stream4: Eco-friendly solutions for waste management, infrastructure, safety, alternative energy sources, Agriculture, Environmental science and other fields of engineering.

HOW TO PURSUE THE PROJECT WORK?

- The first part will be learning-based-masking students to embrace the methodology by exploring all the phases of design thinking through the wallet/ bag challenge and podcasts.
- The second part will be more discussion-based and will focus on building some necessary skills as designers and learning about complementary material for human-centered design.
- The class will then divide into teams and they will be working with one another for about 2-3
 weeks. These teams and design challenges will be the basis for the final project and final
 presentation to be presented.
- The teams start with Design Challenge and go through all the phases more in depth from coming up with the right question to empathizing to ideating to prototyping and to testing.
- Outside of class, students will also be gathering the requirements, identifying the challenges, usability, importance etc
- At the end, Students are required to submit the final reports, and will be evaluated by the faculty.

TASKS TO BE DONE:

Task 1: Everyone is a Designer

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L T P

C 1

AIM: This course is used to practice computer hardware components, peripherals and troubleshooting process also learn various IT concepts, practice it

PRE-REQUISITE: Problem Solving and Programming

LIST OF EXPERIMENT

- Study of hardware components (such as storage devices, I/O devices, CPU, Motherboard, other peripherals).
- 2. Installation of operating systems (Windows and Linux).
- 3. Other software installation.
- 4. Study of network components.
- 5. Network establishment(configuring IP address, Domain name system)
- 6. Study of Internet.
- 7. Introduction to Web.
- 8. Usage of internet services- Email, File Sharing, Social Media etc.
- 9. Study of firewalls and Antivirus.
- 10. Troubleshooting various problems.

TOTAL: 30 HOURS

COURSE OUTCOMES

EMPLOYABILITY

ENTREPRENEURCALD

At the end of this course, students will able to,

CO1: Illustrate various computing components and operations

CO2: Configure various operating systems

CO3: Use various disk operating systems shell commands from problem solving

CO4: Manage networking operations and installing software packages

CO5: Use various internet applications for communication

CO6: Understand web and mobile apps

CO7: Use of various social media applications

REFERENCES:

- Craig Zacker& John Rourke, "The complete reference: PC hardware", Tata McGraw Hill, New Delhi, 2001.
- Mike Meyers, "Introduction to PC Hardware and Troubleshooting", Tata McGraw Hill, New Delhi, 2003.
- B.Govindarajulu, "IBM PC and Clones hardware trouble shooting and maintenance".

Tata McGraw-Hill, New Delhi, 2002

- R. Kelly Rainer, Casey G. Cegielski, Brad Prince, Introduction to Information Systems, Fifth Edition, Wiley Publication, 2014.
- James F. Kurose, —Computer networking: A Top-Down Approachl, Sixth Edition, Pearson, 2012.
- R. Kelly Rainer, Casey G. Cegielski, Brad Prince, Introduction to Information Systems, Fifth Edition, Wiley Publication, 2014

 Craig Zacker& John Rou ke, "The complete reference: PC hardware", Tata McGraw Hill, New Delhi, 2001.

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ENGINEERING INTELLIGENCE II

L T P C 0 0 2 1

Prerequisite: Engineering Intelligence - I

MODULE I

VOCABULARY BULIDING

6 Hours

Parts of Grammar-SVA- Art of Writing-word building activities

MODULEII

COMMUNICATION WORKSHOP

6 Hours

Story Telling- Newspaper Reading-Extempore.

MODULEIII I

INTERPERSONAL SKILLS

6 Hours

Personality Development - Creativity and innovation - Critical Thinking and Problem Solving - Work Ethics-Technical Skill Vs Interpersonal Skills

MODULEIV

LEADERSHIP& EMPLOYABILITY SKILLS

6 Hours

Levels of Leadership-Making of leader-Types of leadership-Transactions Vs Transformational Leadership – Exercises - Industry Expectations & Career Opportunities- Recruitment patterns.

MODULE V

RESUME BUILDING

6 Hours

Importance of Resume-Kesume Preparation - introducing onself

TOTAL: 30 HOURS

Course Outcomes:

Skill DEVELOPMENT

On the successful completion of the course, students will be able to

CO1: Understand various vocabulary building activities.

CO2: Use various communication skill workshop for reading and writing.

CO3: Apply interpersonal skill to motivate creating and innovating skills.

CO4: Apply various leadership and employability skill to get career opportunities

CO5: Prepare resume with necessary components

REFERENCES:

- 1. Barun K. Mitra; (2011), "Personality Development & Soft Skills", First Edition; Oxfor Publishers.
- Raymond Murphy, Essential English Grammar in Use, Cambridge University press, New Delhi, Third Edition., 2007.
- Arun Sharma and Meenakshi Upadhyav, How to Prepare for Verbal Ability and Reading Comprehension for CAT, McGrawHill Publication, Seventh Edition 2017.

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HO CAD (COMPUTER AIDED DRAFTING) LAB

EMPLOYABILITY | ENTREPRENDUESHIP

List of Experiments:

Basics commands of a CAD software- two-dimensional drawing, editing, layering and dimensioning -coordinate Systems-Drawing practice - orthographic views of simple solids using CAD software.

- Study of capabilities of software for Draffing and Modeling Coordinate systems (absolute, relative, polar, etc.) - Creation of simple figures like polygon and general multi-line figures
- Drawing of a Title Block with necessary text and projection symbol.
- 3. Drawing of curves like parabola, spiral, involute using B-spline or cubic spline.
- Drawing of front view and top view of simple solids like prism, pyramid, cylinder, cone, etc, anddimensioning
- Drawing front view, top view and side view of objects from the given pictorial views (eg. V-block Base of a mixie, Simple stool, Objects with hole and curves) vi
- 6. Drawing sectional views of prism, pyramid, cylinder, cone, etc.,
- Drawing isometric projection of simple objects.
- Creation of 3-D models of simple objects and obtaining 2-D multi-view drawings from 3-D model

Total: 30 Hou

References:

1. N.D. Bhatt, Machine Drawing, Charotar Publishing House Pvt. Ltd., 2014.

P.S. Gill, A Textbook of Machine Drawing, Katson books, 2013.

R.K. Dhawan, A Textbook of Machine Drawing, S. Chand 2012.
 K.C. John, Textbook of Machine Drawing, PHI Learning Pvt. Ltd., 2009.

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Thethi Nazare 61 193
Nagapatunan (Litteranti L.

BASIC ELECTRICAL AND ELECTRONICS

ENGINEERING LABORATORY

Aim: To apply the fundamentals of Electrical and Electronics Engineering

LIST OF EXPERIMENTS:

Experiments related to venification of Ohm"s law and Kurchhoff's laws

Experiments involving logic gates

Fan and light control using regulators

Design of 6V regulated power supply

Energy conservation demonstration experiment using energy meter

Waveform generation and calculation of rms and average values 91

IC 555 and IC 741 based experiments

Experiments in earthing 00

Staurcase wuring and residential building wuring

Speed control of DC shunt motor

COURSE OUTCOMES: SKILL DEVER-PRINCIP

Upon completion of this course, students will be able to

CO1: Design and analyze electronic circuits 200

lest digital logic gates

CO3: Control lights and speed of motors

CO4: Measure electrical parameters using instruments

CO5: Generate waveforms

CO6: Construct different wiring schemes.

References:

Total: 30 Hours

Edward Hughes, "Electrical Technology,", Pearson Education

D.P. Kothari and Nagrath" Basic Electronics", MH Education 2013.

Paul Scherz and Simon Monk "Practical Electronics for inventors" Mc Graw Hill Publications 2013. https://mptel.ac.in/courses/122106025/

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ENGINEERING PHYSICS LAB

SKILL DEVELOPMENT

List of Experiments:

- Determination of wavelength of various colours of mercury spectrum using Laser grating
- Determination of velocity of liquids using ultrasonic interferometer
- Determine the dispersive power of a prism using spectrometer
- Determine the unknown resistance of the given wire using Carey-Foster's Bridge
- Determine the band gap of the given semiconductor
- Determine the acceptance angle and particle size using Laser
- Torsional pendulum Rigidity modulus of a steel wire
- Thickness of a thin wire Air Wedge
- Measurement of Young's modulus Uniform and Non-uniform bending
- Thermal conductivity -Lee's Disc method

30 Hours Total:

References:

- 'Practical Physics', R.K. Shukla, AnchalSrivastava, New age international (2011)
- 'B.Sc. Practical Physics', C.L. Arora, S. Chand &Co. (2012)

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RAMABAI

1901MA302		Engineering Mathematics III	L	T	P	C
		Queuing Model and Network Model	3	2	0	4
PREREQUISITE	S:	1. Engineering Mathematics - I				
		2. Engineering Mathematics - II			_	_
COURSE OBJEC	TIVES:	SKILL DEVELOPMENT				
	1. To introdu	ce Fourier series analysis and applications in Engin	eering, apo	at from	its use	in
	solving boun	dary value problems.				
	theory.	as on more advance topics that are particularly used	•	-		
	3. To emphas models and q	is on more advance topics that are particularly user meuing theory.	ful in mode	ling, su	ch as M	larko
Module I	FOURIER S	SERIES			9+3 Ho	mre
Dirichlet's condit		Fourier series – Odd and even functions – Half	range sine	series	- Half	TOTO
		- Harmonic analysis.	- Jane	a man about		
Module II		TRANSFORMS			9+3 H	ours
Statement of Fou	rier integral the	orem – Fourier transform pair – Fourier sine and	cosine tra			
Properties - Tran	sforms of simpl	e functions - Convolution theorem - Parseval's	identity			
Module III	QUEUEINO	MODELS	0.25	T	9+3]	Tons
Characteristics of	Queuing Mode	els – Markovian Queues – (M / M / 1) : (FIF	2 / on /m)	(M /		
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Module IV	NETWORK	MODEL			9+3 1	Ionr
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Module V		TATION AND ASSIGNMENT MODELS			9+3 1	
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Text/Reference						
	Transforms an	d Partial Differential Equations", Second reprint	Tata McC	raw H	ill Educ	ation
		ring Mathematics", 42nd Edition, Khanna Publis	have Dalle	2013		_
Gross D and Har	ris C M "Fund	amentals of Quening Theory", Wiley Student Ed	liers, Dem	1, 2012.		_
4. Robertazzi, "Co Edition, 2006	mputer Networ	ks and Systems: Queuing Theory and performan	ce Evaluat	ion", S	pringer	, 3 rd
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7. Kalavathy S, Op	perations Resear	rch, Second Edition, Vikas Publishing House, 20	04.	1	-	
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	14.4	DATA STRUCTURES L	T	P	C
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DDEDECT	CEEEe.				
PREREQUI	SITES:	Description in C			
COURSE		Programming in C.			
OBJECTIVI	FS-				
ODOL OLIVI		exposed to the concepts of ADTs			
		arn linear data structures – list, stack, and queue.		_	
		exposed to sorting, searching, hashing algorithms			
	4. Le	arn to apply Tree and Graph structures			
Module I	TENTENDE	DATA STRUCTURES - LIST	-		
SCHOOL STREET,	A STATE OF THE PARTY OF THE PAR	ure Types - Data structure operations - Abstract Data Types (ADT		9+3H	
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Module III	SORTING	, SEARCHING AND HASH TECHNIQUES		9+3E	lour:
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Signal programme and com-

1902CS302	OBJECT ORIENTED PROGRAMMING	L	T	P	C
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PREREQUIST					
COURSE OBJ	2. Introduction to Computer		_		
COURSE OBJ					
	 To demonstrate adeptness of object oriented prog developing solutions to problems demonstrating u abstraction, encapsulation, and inheritance. 	isage	ot d	ata	
	 To understand the concepts behind object-oriented using C++ 	d prog	Tan	uming	
	To analyze and understand the functionality of pro- in Isva	ogran	1 CO	de wi	itter
Module I	INTRODUCTION TO C++			9 H	our
function overlos and objects – co	C++ - classes - access specifiers - function and data members - de ding - friend functions - const and volatile functions - static members - nstant objects - nested classes - local classes			- poi	nter
Module II	CONSTRUCTORS			9 H	CONTRACTOR OF
copy constructo	default constructor — Parameterized constructors — Constructor with dy r — destructors — operator overloading — overloading through friend func- merator — type conversion — explicit constructor				
Module III	INTRODUCTION TO JAVA			9 H	our
Overview of jav	a-data types-variables-operators-arrays-control statements-object and class	sses-1	meth		
	static members-finalize methods-constructors-exception handling				
	INHERITANCE AND POLYMORPHISM			9 H	our
Inheritance-supe	r keyword-types of inheritance – polymorphism- method overriding-meth	hod o	verl		
	ner class-interfaces-reflections				
Module V	STRING HANDLING	197		9 H	our
	special string operation-string buffer-collection framework: collection interests string utility-file utility-I/O utility-entity utility-array utility	e x		300	
		otal		45 H	our
	ADING / SEMINAR :				
	RTTI				
	Function templates				
	ANSI String Objects		ald in	,	
OUTCOMES:	EMPLOYABILITY				
A STATE OF THE STA	After completion of the course, Student will be able to		4		
COl	Define the features of C++ supporting object oriented programming				
CO2	Understand the major object-oriented concepts such that constructor and overloading in C++	d ope	rator		
CO3	Define the features of Java supporting object oriented programming		3000		
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CO4	Understand the concepts for Java Inheritance, Polymorphism and Java I			-	
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PRINCIPAL

E.G.S. Pillay Engineering College,

Thethi, Nagore - 611 002.

Nagapattinam (Dt) Tamil Nadu,

1902CS303		COMPUT	ER ORGANIZAT	TON AND	L	T	P	C
			ARCHITECTURE	3				
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PREREQUISI	TES::	Introduction to Con	aputer, Programming	in C				_
COURSE OBJ	ECTIVES:							
	1. To	make students under	stand the basic struct	ture and operation	of digita	l cor	mon	er
	2. To	study the concepts o	f pipelining.					
		o expose the students		allelism	15		71	
	4. To	familiarize the stude	nts with hierarchical	memory system i	ncluding	cael	ie .	
		emories and virtual m			-			
Module I	STRUCTU	TRE OF COMPUTE	RS & MACHINE I	NSTRUCTION		9	Ho	urs
Functional Mod	lule s - Basic	operational concepts	- Bus structures - So	ftware - performa	nce – Te	chno	logy	_
Instruction and	instruction s	equencing – Addressi	ng modes - operation	as and operands-E	asic I/O	oper	ation	15.
ALU design - F	ixed point a	nd floating point oper	ations	***************************************		•		NT .
Module II		ROCESSING MODU				9	Ho	urs
Fundamental co	ncepts - Exe	ecution of a complete	instruction - Multipl	e bus organization	n – Hardy	wire	1	
control - Micro	programme	l control – Nano prog	ramming.					
Module III	PIPELINI	NG		AND THE RESERVE		9	Ho	ur
Basic concepts	– Data hazar	ds – Instruction hazar	ds – Influence on ins	truction sets -Dat	a path an	ıd		
control consider	rations - Per	formance consideratio	ns - Exception hand	ling.	-			
	PARALLI					9	Ho	OF:
Instruction-leve	l-parallelism	- Parallel processing	challenges - Flynn's	classification - I	Iardware			
multithreading								
Module V	MEMORY	AND I/O SYSTEM	IS			9	Ho	urs
Memory hierard	hy - Memor	y technologies – Cach	e basics – Measurin	g and improving o	ache per	form	ance	
Virtual memory	- Input/outp	ut system, programm	ed I/O, DMA and int	emupts, I/O proce	SSOIS.			
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PREREQUISITES: 1	1902CS304	DIGITAL LOGIC AND MICROPRO	DCESSORS	L	T	P	C
I. Basic electromics				3	0	2	4
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1. Learn the basics of digital functions. 2. Become familiar in combinational and sequential logic circuits. 3. Understand the basics of microprocessor and assembly language programming.	PREREQUI					- 49	
1. Learn the basics of digital functions. 2. Become familiar in combinational and sequential logic circuits. 3. Understand the basics of microprocessor and assembly language programming. MODULE I BOOLEAN ALGEBRA AND LOGIC GATES 30 logic gates: AND OR NOT MAND NOR and XOR gates. MODULE II COMBINATIONAL LOGIC CIRCUITS 11 Hour introduction – adder – subtractor – code conventer – multiplexer and de-multiplexer – parity checker an generator – magnitude comparator. MODULE II SEQUENTIAL CIRCUITS 12 Hour MODULE II SEQUENTIAL CIRCUITS 13 Introduction – realization of on his flop using other flip flop – synchronous counter design. MODULE II SEQUENTIAL CIRCUITS 14 Hour Synchronous sequential circuits: Latches – flip flops – characteristic table and equation – realization of on his flop using other flip flop – synchronous counter design. MODULE IV MICROPROCESSOR 8085 AND 8086 10 12 Hour MICROPROCESSOR 8085 AND 8086 11 12 Hour MICROPROCESSOR 8085 AND 8086 12 13 Hour MICROPROCESSOR 8085 AND 8086 13 14 Hour MICROPROCESSOR 8085 AND 8086 14 15 Hour MICROPROCESSOR 8085 AND 8086 15 16 Hour MICROPROCESSOR 8085 AND 8086 16 17 18 Hour MICROPROCESSOR 8085 AND 8086 17 18 Hour MICROPROCESSOR 8085 AND 8086 18 18 Hour MICROPROCESSOR 8085 AND 8086 19 18 Hour MICROPROCESSOR 8085 AND 8086 19 18 Hour MICROPROCESSOR 8085 AND 8086 19 18 Hour MICROPROCESSOR 8085 AND 8086 10	COTTO						
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## MODULE V \$051 MICROCONTROLLER AND I/O INTERFACING 12 Hour ## MODULE V \$051: Pin diagram — architecture — addressing modes — instruction set — assembly language programming. ## Wo interfacing: Serial and parallel interfacing — D/A and A/D converter. ## Experiments: Digital: 1. Study of logic gates. 2. Design of adder and subtractor. ## 2. Design of code converters. 4. Implementation of MUX and DEMUX. ## 5. Implementation of parity checker and generator. ## 6. Design of synchronous and asynchronous counter. ## Microprocessor: ATTESTED ## Microprocessor: ATTESTED ## 6. Design of synchronous and asynchronous counter. ## Microprocessor: ATTESTED ## 6. Design of synchronous and asynchronous counter. ## Microprocessor: ATTESTED ## 7. S. RAMABALAN, M.E ## PRINCIPAL ## 8. E.G.S. Pillay Engineering College ## Thethi. Negore - 6-14 002 **Nagapattinami. (Di) Turn. Fram. Fram. ## TOTAL: 60 HOUR: ## FURTHER READING / CONTENT BEYOND SYLLABUS / SEMINAR :							
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COURSE O	BJECTIVES:				
	1.To create awareness among students about the Indian Constitution.	17		. WE	
	2. To acquaint the working conditions of union, state, local levels, their	r powe	rs and	functi	ons.
	 To create consciousness in the students on democratic values and proconstitution. 	inciple	s artic	ulated	in the
	4. To expose the students on the relations between federal and provinc	ial unit	5.	ar i	Cole la
	To divulge the students about the statutory institutions.	11			
MODULEI	EVOLUTION OF THE INDIAN CONSTITUTION			6	Hours
1909 Act, 1919 A Indian Constitutio	ct and 1935 Act. Constituent Assembly: Composition and Functions; Fu n.	ndame	atal fe	atures	of the
MODULE II	GOVERNMENT			6	Hours
State Governmen	ent: Executive-President, Prime Minister, Council of Minister nt: Executive: Governor, Chief Minister, Council of Minister nt: Panchayat Raj Institutions, Urban Government				
MODULE III	RIGHTS AND DUTIES		Terral I	6	Hours
Fundamental R	ights, Directive principles, Fundamental Duties				734
MODULE IV	RELATION BETWEEN FEDERAL AND PROVINCIAL UNITS		2	6	Hours
Union-State relati of India	ons, Administrative, legislative and Financial, Inter State council, NITI	Ayog, I	inanc	e Com	mission
MODULE V	STATUTORY INSTITUTIONS			ő	Hours
Elections-Election	Commission of India, National Human Rights Commission, National C	ommis	sion f	or Woo	men
	Total:			30	Hours
COURSE	After completion of the course, Student will be able to		18,715		
OUTCOMES	EMPLOYABILITY				
CO1	Know the background of the present constitution of India.	1 1 2			
CO2	Understand the working of the union, state and local levels.		v = 117/	area.	e ferra
CO3	Gain consciousness on the fundamental rights and duties.			-25	
CO4	Be able to understand the functioning and distribution of financial rand states.	esource	s betw	reen th	e centre
COS	Be exposed to the reality of hierarchical Indian social structure and the deprived sections can be addressed to raise human dignity in a d	-			ices of
References:					
	hi Introduction to the Constitution of India " Prentice Hall of India, New ap, Our Parliament, National Book Trust, New Delhi	Delhi.			
of the second se	an Government &Politics, Prentice Hall of India, New Delhi			1	
	uldeep Fadia, Indian Government &Politics, Lexis Nexis, New Delhi				

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Nagapattinam (Dt) Tamil Nach.

1902CS352		NTED PROGRAMMING BORATORY	L	T	P	C
	LA	BORATORI	0	0	2	1
PREREQUISI	F .					
FREREQUISI	1. Basic Computer kno	andadas				
	2.Programming in C l		-			
COURSE	Z.Flogramming in C i	_a0				
OBJECTIVES						
Obsectives	encapsulation, abstraction	object-oriented programming as 1. inheritance, and Polymorphis	m.	-		
	To make the student learn	an object oriented way of solv	ing probl	lems u	sing ja	ıva.
		write programs using multi-threa				
LIST OF EXP					E de la constitución de la const	
Write a	C++ program using Static Data M	embers		MANUFACTURE OF THE PARTY OF THE		
	C++ program to implement the Mu					
	C++ program to implement Opera		inary ope	erator		
	C++ program to implement Constr					- 1
Write a	ava program to implement Contro	ol Statements				
6. Write a	ava program to implement Multi-	threaded programming				
	ava program to implement Multip					
	lava program to implement Polym		1-2-1		- 11	
1000000			0 15			
9. Write a	ava program to implement Excep	hon handling in various cases				
10. Write a	program to implement various Stri	ng metnods in Java				
			10	tal:	45 H	our
ADDITIONAL EXPERIMEN						
		y and binary operator as Norm				
		levelop simple application(proje	ect) using	g OOP	's con	cept
COURSE	After completion of the course, St	udent will be able to				
OUTCOMES	EMPLOYA BILITY					
CO1	Implement basic C++ programs				-	
CO2	Implement major object-oriented	concepts such that constructor	and open	ator ov	erload	ling
	in C++					
CO3	Implement Java programs with b					
CO4	Implement the concepts for Java				1.	
CO5	Demonstrate the working of string	builder and string buffer in Str	ing hand	ling		
REFERENCE	A December 1	1.6				
	cturenotes in/practicals/19363-lab			ing		
	dentsfocus.com/cs6461-object-ori	ented-programming-lab-manua	1			
	tbvrm.ac.in/public/testimonia					
4. http://w	ww.srmuniv.ac.in/sites/default/file	S ATTESTED	1			

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1902CS3	51	DATA STRUCTURES LABORATORY	L	T	P	C
			0	0	2	1
PREREC	DUISITES:					
		Basic Computer knowledge.				
S. Mala		2.C Programming.	THE			1, 13
COURSE	2					17.5
OBJECT	TVES:					
	1	. Be exposed to implementing abstract data types				
	2	. Learn to implement sorting and searching algorithms.				
	3					1 3
List of Ex	periments:					
		am to implement Singly Linked List	-	-	- Married	-
2. V	Vrite a progr	am to implement Stack using Array and Linked List		-		
		am to implement Queue using Array and Linked List	160	-		
		am to implement conversion of Infix Expression to Postfix Express	ion			
		am to sort a set of elements using bubble sort, insertion sort, shell s		erge	sort	
V- 100	nd quick sor		,	5		
		am to implement searching using linear search and binary Search.				
	and the second second second second	am to Implement Binary Search Tree				
		am to Implement Tree traversal Techniques				
9. V	Urite a progr	am to Implement Minimum Spanning Tree using Prims and Kruska	1 110	with	***	
		am to implement Shortest Path using Dijkstra's algorithm.	Aigu	MILLIAM	11	
10. 1	vinc a progr		TOU !	14		VIVIO
Addition	al	10	tal:	43	Ho	urs
Experime						
Lapernin		Program to construct an expression tree for a given tree				
	2	. Implementation of Bellman-Ford algorithm and Floyd - Warshal	lalgo	rithm	2	*
COURSE		importantiation of Definal-1 ord algorithm and 1 toyd - Warsha	agu	THIRT	L	-
OUTCOL		EMPLOYABILITY				
00100.	AND DESCRIPTION OF THE PARTY OF	pletion of the course, Student will be able to		7,310		
CO1		implement C programs for implementing stacks, queues, linked lis	ete.			
		stack applications.	LJ.		_	
CO3		earching and sorting programs.				
CO4		different data structures for implementing solutions to practical pro-	hlems		À	
	rippry die	american datas succeedes for imprenienting solutions to practical pro-	DICHIS			
CO5	Develop re	scursive programs using trees and graphs			H	
REFERE	NCES:		7819	1		
1. w	ww.cs.cf.ac	uk/Dave/C/	2 02	28.18		
2. 1	nttp://www.h	ysator.liu.se/c/bwk-tutor.html	ED	0	7 1	
		books.org/wiki/Data Structures/Introduction ATTEST	3	7		
		skimo.com/~scs/cclass/notes/top.html	1			
			ANI	AE.F	11.D.	1

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Nagapattinam (Dt) Tamil Nadu.

1904GE351		L	FE SKILLS: SOFT SKILL	-	L	T	P	C
					0	0	2	
COURSE OBJE	CTIVES:	The stude	ent should be made to:					
	l. To de	evelop the stu	idents basic soft skills and enable t	nem to get a	job.			
		evelop the strectively.	idents' interpersonal skills and to e	nable them t	o res	pond		
		evelop the stu cess.	idents selling skills and to enable th	nem to apply	in th	heir in	tervie	w
	4. To de	evelop the stu	idents' CorporateEtiquette and enal	ble them to r	respo	nd ef	fectiv	ely.
	5.To de	velop the stu	dents' learning by practice of givin	g different s	ituat	ions.		-
Module I	Introductio	n te Soft Sk	ills				6 H	our
Soft Skills an (Overview - Bas	sies of Comn	nunication – Body Language – Posi	itive attitude	-Im	provi	ng	
Perception and	forming value	es – Commur	nicating with others.					
Module II	Team vs Tr	Control of the Contro				- 1	6 H	our
			s – Art of Listening - Group Dynar					
	THE PROPERTY OF THE PROPERTY OF	DESCRIPTION OF THE PROPERTY OF THE PERSON OF	entations - Group interactions - Im	proved work	k Ne.	lations		
Module III	Selling One		1 P	D' '	-	. 1	6 H	our
How to brand			hunting - Resume writing - Group	p Discussion	1 - IV	lock (3.L) -	
.mterview skii	is - Mock inter	rview						
N.C. A.I. TY?	Commence	F 42 may Ada				4	<i>C</i> II	i i i i i i i i i i i i i i i i i i i
Module IV	Corporate l	The second secon	W				6 H	our
What is Etique	tte – Key Facto	ors – Greetin	gs – Meeting etiquette – Telephone	etiquette –	ema	il I	6 H	our
What is Etique etiquette – Din	tte – Key Facto ing etiquette –	ors – Greetin Dressing eti		etiquette –	ema	il		
What is Etique etiquette – Din Module V	itte – Key Facto ing etiquette – Learning b	ors – Greetin Dressing eti y Practice	quette .				6 H	our
What is Etique etiquette – Din Module V My family-Mys Travelling - Gou	tte – Key Factoring etiquette – Learning by self-Meeting pag abroad- Go	ors – Greetin Dressing eti y Practice people-Maku ing through (out town-O	ur f	lat-He	6 H	our life
What is Etique etiquette – Din Module V My family-Mys	tte – Key Factoring etiquette – Learning by self-Meeting pag abroad- Go	ors – Greetin Dressing eti y Practice people-Maku ing through (quette . ng ContactsA city-Getting abo	out town-O	ur f	lat-Ho	6 H	our: life ll- A
What is Etique etiquette – Din Module V My family-Mys Travelling - Gou	tte – Key Factoring etiquette – Learning by elf-Meeting pag abroad- Goi biscussing busing	ors – Greetin Dressing eti y Practice people-Maku ing through (ness.	quette . ng ContactsA city-Getting abo	out town-O	ur f	lat-Ho	6 H ome ne ca	our: life ll- A
What is Etique etiquette – Din Module V My family-Mys Travelling - Goir modern office- D	tte - Key Factoring etiquette - Learning by self-Meeting pag abroad- Gorbiscussing busing COMES:	Dressing eti Dressing eti y Practice people-Maku ing through (ness.	quette . ng Contacts - A city-Getting abo Customs-At a hotel-Shopping- Eati DEVELOPMENT	out town-O	ur f	lat-Ho	6 H ome ne ca	our life ll- A
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Nagapattinam (Dt) Tamii Nudu.

1902CS401				SOFT	TWAF	RE E	NGIN	EER	ING			L	T	P	C
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COURSE OB.	Control of the Contro		lamer in	, made	retan di	in a th	a harri	- thora	of	-	o on mis	. namin n	ond t	n armen	le.
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	THE RESIDENCE OF THE PARTY OF T		-	-			-		-		**	A	-6	-	
	To guide high quality														
	maintain.	y, somw	ane ma	11 15 1e	maore a	and m	Bat 15 1	eason	aory ea	sy to	unders	isno, n	nomi	HEIG	
	3.To provid	de en m	-doresto	mding	af mila	er elege	a shall	e men i	mmorto	and .				-	
	5.10 provid	de an un	udersta	nume,	O1 WII)	у шез	se sam	Sale	прога	IIIL.			-		
Module I	SOFTWAI	DE EN	CINE	FRIN	CCO	NCE	PTC						-	0 H	ours
Software Engir	A STATE OF STREET, STREET, A STREET, S		Annual Control of the	and the second second second	And the latest the second		SCHOOL STATE	s - Sof	hurare (mgin	eering			9 11	omra
paradigms - G							STATE OF THE PARTY			-		model	- STYLE	al mo	dal .
incremental ma						year	mouer	-brose	type m	mue1	- KAD	model	- sher	ar med	wei -
Module II	MANAGIN		36			ECTS								0 H	OUT5
Metrics : Metri	Carried and Carried Section 1997	and the same of the same of		And the second second	Control of the Control			ureme	mt - M	etrics	for sof	ftware	-		war 2
Quality - Integr															
Management -									30						
The second secon	DESIGN C				1					200	TOP J			9 H	ours
Design Process	Character development of the Character Street		THE PERSON NAMED IN	en Co	ncents	s - Sot	flware	archi	ecture	- Arc	hitectu	ral stv	le des	Mary Company	AND RESIDENCE
Mapping - user															
Module IV	SOFTWAL		STING	G ANI	D DEB	UGG	GING				Up de la	77.7		9 H	ours
Testing Fundar								-	- Basi	s path	testina	z - dats	flow	testin	o _
testing for spec															=
testing - system						1					n man:	geme	nt .		
Module V	ADVANCE	20.30	No. of the local division in the local divis	-										9 H	ours
Computer Aide	d Software E	Enginee	ering - (Clean	room :	softw	are en	gineer	ing - F	eeng	ineerin	g - Re	verse	1=0	
Engineering.															
											To	otal:		45 H	ours
FURTHER R	EADING /S	SEMIN	VAR:	AN ET		A STATE									
	Version ma	ianagem	nent			Marie .									
	ISO 9000 Q	Quality :	Standa	rds											
COURSE OU	TCOMES:		EM	Ploy	A BIL	it y	1			A Local				,	
	After comp	pletion o						able to							
COI	Build an ap	ppropria	ate proc	cess m	odel fo	or a g	iven p	roject							10
CO2	Analyse the	e princij	ples at	variou	us phas	ses of	softw	are de	velopn	nent	G. M.	200			
CO3	Translate sp	pecifica	ations i	nto de	sign ar	nd ide	entify :	the co	mpone	uts to	build t	he			
	architect	ture for	a giver	n probi	dem, al	ll usin	ig an a	approp	criate so	ofiwa	re engi	neering	metl	odolo	gy
CO4	Define a P	Project :	manag	ement	plan	and t	tabula	te app	ropriat	e test	ting pla	ans at	differ	ent le	vels
-17	during the	develop	ment o	of the	softwa	re									
CO5	Understand	d the so	oftware	e proje	ect est	timati	ion m	odels	and es	timat	e the	work t	to be	done	and
	resources re	required	and th	ie sche	edule fo	OT A 5	oftwar	re proj	ect			OIL T			
REFERENCE	S:			hing and											
1. Roger S. Pre	ssman, Softw	ware En	igineeri	ing: A	. Practi	itione	r's Ap	proacl	, Mc-(Haw	Hill, 71	h			
Edition, 20	10.			1/10											
2. Ian Somervi	lle, Software	Engine	eering	Addi	son-W	esley.	, Sth e	dition	2006.						
3. Steve McCo											ALL	5375	0/		
4. Richard E. F	airley, Softw	vare Eng	gineeri	ng Co	ncepts	, Mc(Graw-	Hill,	985		6	-	/ -	•	
5.https://nptel.a	c in/courses/	/106105	5087/#				Dec 35-1		Dr.	S.R	AMAE	BARA	N Me	Dhe	,
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Thethi, Nagoro
Nagapattinam (U., recommended)

1902CS402		OPERATIN	G SYSTEMS	L	T	P	C
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PREREQUI	SITES:						
REREGEL	JIILJ.	Basic Computer knowled	ga .				
COURSE OF	BJECTIVES:	The student should be n	A CONTRACTOR OF THE CONTRACTOR	-			
COOPER OF		ructure and functions of OS	A STATE OF THE STA				_
		esses, Threads and Schedul	201				_
		inciples of concurrency and					
	-	mory management schemes					_
		ement and File systems.	*				
×_1		of Linux system and perform	a administration tasks	on Linere	Commen		
. r. 1-1-T	INTRODUCTION		i audiumisuative tasas	OH LAHUA	Jet vers	- Indiana	
Module I			becausing Contains Co			9 H	
		s of Operating Systems - C					
Componenets Machines	- Operating System	Services – System Calls –	System Programs -	system sur	uctures	- V1	ma
	PROCESSALAN	CELCUE				O TT	200
Module II	PROCESS MANA					9 H	120-000-00
		Scheduling, Co-operating					
		; CPU Scheduling, Proces					
		synchronization; Deadloc					
	adlocks -Deadlock Pr	evention – Deadlock avoi	dance – Deadlock	detection -	- Reco	very :	fron
Deadlocks.							
Module III	MEMORY MAN	Control of the Contro				9 H	MANAGEMENT.
		1 - Swapping - Contiguou					
		al Memory: Background	-Demand paging -	Process	creatio	n -	Pagy
man I m m man man #			1-0-0				
- M	 Allocation of frames 				200		
- M	The second secon	-Thrashing AND I/O SYSTEMS			1	9 H	
Module IV	FILE SYSTEMS				Ì	9 H	our
Module IV File System : System Imple	FILE SYSTEMS File concept – Acce ementation : Director	AND I/O SYSTEMS s methods – Directory stru y implementation – Alloca	cture – File system : tion methods – Free	mounting -	Protec	9 H	our File
Module IV File System : System Imple	FILE SYSTEMS File concept – Acce ementation : Director	AND I/O SYSTEMS s methods - Directory stru	cture – File system : tion methods – Free	mounting -	Protec	9 H	our File
Module IV File System : System Imple Storage Struc	FILE SYSTEMS File concept – Acce ementation : Director	AND I/O SYSTEMS s methods – Directory stru y implementation – Alloca	cture – File system : tion methods – Free	mounting -	Protec	9 H	our File fass
Module IV File System : System Imple Storage Struc Module V	FILE SYSTEMS. File concept – Accementation: Director ture: Disk scheduling CASE STUDY	AND I/O SYSTEMS s methods – Directory stru y implementation – Alloca	cture – File system r tion methods – Free space management –	mounting - e-space ma RAID.	- Protection	9 H tion ent. M	our File fass
Module IV File System: System Imple Storage Struc Module V Linux System	FILE SYSTEMS. File concept – Accementation: Director ture: Disk scheduling CASE STUDY Basic Concepts; Systems	AND I/O SYSTEMS s methods – Directory stru y implementation – Alloca – Disk management –Swap-	cture – File system : tion methods – Free space management – ements for Linux Sy	mounting - e-space ma RAID.	- Protecting Protectin	9 H tion ent. N 9 H or, Se	our File fass
Module IV File System : System Imple Storage Struc Module V Limux System	FILE SYSTEMS File concept – Acces mentation: Director ture: Disk scheduling CASE STUDY Basic Concepts;Sys Multifunction Server,	AND I/O SYSTEMS s methods – Directory stru y implementation – Alloca – Disk management – Swap- stem Administration-Requir	cture – File system i tion methods – Free space management – ements for Linux Sy tting Up Local Netw	mounting - e-space ma RAID.	- Protecting Protectin	9 H tion ent. N 9 H or, Se	our File fass
Module IV File System : System Imple Storage Struc Module V Limux System	FILE SYSTEMS File concept – Acces mentation: Director ture: Disk scheduling CASE STUDY Basic Concepts;Sys Multifunction Server,	AND I/O SYSTEMS s methods — Directory stru y implementation — Alloca - Disk management – Swap- stem Administration-Requir Domain Name System, Se	cture – File system i tion methods – Free space management – ements for Linux Sy tting Up Local Netw	mounting - e-space ma RAID. estem Adm ork Service	Protecting	9 H ction ent. M 9 H or, Se ualiza	our File fass our tting
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Dr. S. RAMABALAN, M.E., Ph.D.,
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E.G.S. Pillay Engineering College, Thethi, Nagore - 611 002. Nagapattinam (Dt) Tamil Nadu/

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1901MGX01		TOTAL QUALITY MANAGEMENT	L	T	P	C
	1	A SALE OF THE SALE	3	0	0	3
Course Objectives:	To	facilitate the understanding of Quality Management	principles a	nd pr	ocess.	4
Unit I	TROD	UCTION			9 H	our
service quality – Bar – Barriers to TQM	ic conce - Quality	tity – Evolution of quality – Definitions of quality - epts of TQM – TQM Framework – Contributions of y statements – Customer focus – Customer orienta mer retention – Costs of quality.	Deming, Ju	ran ai	id Cro	osb
		INCIPLES		/	9 H	omr
Empowerment, Te Continuous proces Supplier selection.	am and ' s impro Supplies	AND DESCRIPTION OF THE PROPERTY OF THE PROPERT	l, Performan	се ар	praisa	1-
		OLS AND TECHNIQUES I			9 H	
applications to man Bench marking proc	ufacturii ess – FM	of quality – New management tools – Six sigms ng, service sector including IT – Bench marking (EA – Stages, Types.	- Reason t	o ber	ich m	ark
	ALC: NAME OF TAXABLE PARTY.	OLS AND TECHNIQUES II apability – Concepts of Six Sigma – Quality Func			9 H	
Unit V Q Need for ISO 9000	UALIT - ISO 90	1 - TPM - Concepts, improvement needs - Perform Y SYSTEMS 001-2008 Quality System - Elements, Documentate pts, Requirements and Benefits - TQM Implement	ion, Quality	Audi	9Ho ting – wing	- Q:
			Total:		45 H	our
Further Reading:	- in the second	Total and the second and the second second				
1.		eering economics and cost analysis				
2.	Constr	ruction and planning management				
Course Outcomes:		SKILL DEVELOPMENT		3		
A		pletion of the course, Student will be able to				
		nderstand the concepts, dimension quality and philo	sophies of T	QML		
and Statement of		nderstand the principles of TQM and its strategies.				
		pply seven statistical quality and management tools	Sylvania	6/4		
	4. U	nderstand TQM tools for continuous improvement.	A PENNE			
	5. Ui	nderstand the QMS and EMS.			I AND	
References:						
Reprints 2004).		Total Quality Management, Third edition, Pearson	101	9	2	
 ShridharaBhat K Edition 2002. 	, Total (Quality Management – Text and Cases, Himatsy & P	PANNED	AN,	M.E., F	Ph.C
			PRINCI			

E.G.S. Pillay Engineering College, Thethi, Nagore - 611 002. Nagapattinam (Dt) Tamil Nadu:

1902CS451	NETWORKS LABORATORY		L 0	T 0	P 2	C 1
PREREQUISITES						
The second secon	ation and Architecture					
2. Computer Program						
COURSE OBJECT	A CONTRACTOR OF					
	To configure networking in system		Marin.		41	
	To Familiarize with different protocols and net simulators	work compon	ents	using		
	3. To gain knowledge about the working of routing	ig algorithms	100			
List of Experiments						
Study Of Colour C	oding Jack Rj45 And Do The Following Cabling Wor	ks In A Netw	ork		- CONTRACTOR	-
A. Cable Crimping			0.75%			
B. Standard Cabling					-	
C. Cross Cabling An			_			
The second secon						
	Connection Using Three Systems Using Any Topolog					
	Stop And Wait Protocol And Sliding Window Proto	ocol.	1			
 Implementation Of 	Simulation Of ARP And RARP					
4.Implementation Of	Ping Command .			5		1 77
5.Implementation Of	Traceroute Command .					
6.Implementation Of	Http Socket For Web Page Upload And Download					
7.ImplementingSubn						
-	Implementation Of TCP Chat	FILE				2 13
	of File Transfer UsingTcp And Echo Program					
	main Name System And Simulation Of SNMP .					-
12. Implementation (THE REAL PROPERTY.		-	
,		1 7	otal		45 H	
Additional Experim	ients:		ULAL		40 11	ours
	Socket programming			_		_
	Implementation of Networking concepts in Linux		-		17.0	
COURSE OUTCOM		TAN FILIP MAN P			10111	-
	After completion of the course, Student will be able					
COI	Identify the different types of cables in networks.					
CO2	Configure networking in a system.	DI CHI PATE			-	-
CO3	Implement and simulate protocols.					-
CO4	Compare the performance of different routing algori	thme neing ci	muls	tion 1	nols	
REFERENCES:	- want to be a second of the s	THE STATE OF	ZIII OLGO	mon i	0015.	2 -
	an, Data Communication and Networking, 5th Edition	n Tata McGr	aw-F	fill 2	013	
James F.Kurose ar	id Keith W.Ross, Computer Networking: A Top-Dow					1900
Internet, Pearson Edu		112 SELECTION SERVICES	10000	AT	TES	JED,
	md Bruce S.Davie, Computer Networks, Elsevier, 200	9		/	16	2
4. Andrew S.Tanenb	aum, Computer Networks, Pearson Education, 2010			La company of the same of the	19.64	AN
5. William Stallings,	Data and Computer Communication, Pearson Education	ion, 2007 Dr.	S.R	AWI	TOP	IPAL
Douglas E.Comer	and M.S. Narayanan, Computer Networks and Interne	ts, Pearson E	auca	100	LIVIO.	anrin
		E	.G.S.	nethi.	Nago	re - 61
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1902CS452	OPERATING SYSTEMS LABORATORY	L	T	P	C
		0	0	2	1
PREREQU		ST I SUPE	SOUTH .		
	uputer knowledge.				
2.C Program					
COURSE (OBJECTIVES:				
	 To gain a complete knowledge about UNIX commands. 				
	To obtain an overview of distributed operating systems and the rela				
	process communication models (message passing, remote procedure	e call,	distri	ibuted	
	object computing, and shared memory)				
	 To know the concepts of process management and synchronization 	Dr.			
	 To know the concept of memory management such as best fit, wors 	t fit a	ad so	on	
List of Exp	eriments:				
1. Stu	dy of basic Commands in Unix Operating System				
2. Wri	te programs using the following system calls (fork, exec, getpid, exit, wait, clo	se, sta	t,		1
ope	ndir, readdir).				
3. Wn	te programs using the I/O system calls (open, read, write, etc).				
4. Sim	ulation of Unix commands.				
5. Imp	lementation of CPU Scheduling Algorithms(FCFS, SJF, RR, Priorty).				
	lementation of Page Replacement Algorithms (LRU, OPT, FIFO).				
	lementation of memory allocation algorithms (First Fit, Best Fit, Worst Fit)				- 3
	lement the Producer – Consumer problem using semaphores.				
	ulation of Shared Memory Concept.	TE			- 1
10. Imp	lementation of bankers Algorithm.				
11. Imp	lement Paging Technique of memory management.				- 1
12. Imp	lementation Disk Scheduling Algorithms				
13. Stu	ty of Linux OS, Android OS.				
		Tot	al:	45 H	OUTS
ADDITION	AL EXPERIMENTS:				1021
	Implement some memory management schemes			0.5170	1111
	Application Oriented Experiments			= 174	1 1 1 m
	3. Mini Project EMPLOYABILITY		SI - TE		
COURSE O	UTCOMES: After completion of the course, Student will be abl	e to	-	147	
COI	Be familiar with the language and terms of the UNIX/LINUX operating syst	em		188	
CO2		ope	ration	s on	the
	UNIX/LINUX operating system			The state of the s	
CO3	Design, develop and implement a software solution to a given problemwhite	ch em	plovs	opera	ating
	systems tools		CONTRACTOR OF THE PERSON OF TH	1	
REFEREN	ES:		-5	1/21	1
1. http	://www.ee.surrey.ac.uk/Teaching/Unix/unixintro.html				
The second secon	ci/lib in ada/d/afric	FCT		1580	
	://www.ch.embnet.org/CoursEMBnet/Pages05/slides/Unix05.pdf	EST		2	
	//www.ee.surrey.ac.uk/Teaching/Unix/	0/6	1	21	
5. http	//www.comptechdoc.org/os/linux/usersguide/linux_ugshellpropmS.RAMA	BAK	W. N	1.E., PI	1.D.
6. http	//www.cs.jhu.edu/~yairamir/cs418/os4/sld025.html PRI	NCTP	AL		,
	F.G.S. Pillay E	name	ering	Colleg	e,

E.G.S. Pillay Engineering College. Thethi, Nagore - 611 002. Nagapattinam (Dt) Tamil Nadu.

190.	2CS453	DATABASE MANAGEMENT SYSTEMS LABORATORY	L	T	P	C
PPF	REQUISI	TFC:	0	0	L	1
	The same of the sa	ramming Languages	C.	_		
	A	ECTIVES:				
		Learn to create and use a database				
		Be familiarized with a query language				
		. Have hands on experience on DDL Commands				
		. Have a good understanding of DML Commands and DCL commands				
	5	Familiarize advanced SQL queries.				
	6	Be exposed to different applications				
IST	OFFXP	FRIMENTS:		annum Mari		-
	DDL a	nd DML commands				
	Transa	ction control commands and Aggregate Functions				
	Joins a	nd Nested Queries				
1	Constr	aints and Views				
	High le	vel programming language extensions Control structures				
5	Curson				orts.	
7	Trigge	75		1000		
3		tures, Functions and Report				
)		se Design and implementation with any one front end tool (Mini Project)		1		
		e list of Projects				
	1. Hos	pital management				
		way ticket reservation				
		ent Mark list processing				
	4 Carta 4 Carta 177	loyee pay roll processing				
		ntory control				
		mal Information System				
		table Management System				
		Management System				
		e Course Registration System				
-	10.L101	ary Management System	Santan de	LOSS LOSS OF	SARA MAGASA	_
-20.00	UIREME	TOTAL	5	45 H	JUKS	8
Softv	ware: t end: Visu	andalone desktops 30 Nos. (or) Server supporting 30 terminals or more. al Studio or Java or Equivalent le / MySQL/ Sql Server DB2 or Equivalent.				
Back		ADING / CONTENT BEYOND SYLLABUS / SEMINAR :				_
Back UR Inde	THER RE	h Oracle Academy, a programme Oracle Workforce Development Program is programme extensive hands-on training on SQL and PL/SQL will be gi				win
Back TUR Unde onde	THER RE or MoU wit ucted. In the ab session: Writing	h Oracle Academy, a programme Oracle Workforce Development Program is programme extensive hands-on training on SQL and PL/SQL will be gi				urin
Onde onde he L	THER RE er MoU wit ucted. In the ab session. Writing Queryi	h Oracle Academy, a programme Oracle Workforce Development Program is programme extensive hands-on training on SQL and PL/SQL will be gi i. SQL queries for Hierarchical retrieval of data (tree structured data)	iven t			urin
Back TUR Inde ondi he L	THER RE er MoU wit ucted. In the ab session: Writing Queryit Using s	h Oracle Academy, a programme Oracle Workforce Development Program is programme extensive hands-on training on SQL and PL/SQL will be go i. SQL queries for Hierarchical retrieval of data (tree structured data) ing Data Dictionary static Views	iven t			urin
Jude Jude Jude Jude Jude Jude Jude Jude	THER RE or MoU with ucted. In the ab session. Writing Queryit Using of	th Oracle Academy, a programme Oracle Workforce Development Program is programme extensive hands-on training on SQL and PL/SQL will be given by the second s	iven t			urin
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Jude Jude Jude Jude Jude Jude Jude Jude	THER RE or MoU with ucted. In the ab session Writing Queryit Using selection A	th Oracle Academy, a programme Oracle Workforce Development Program is programme extensive hands-on training on SQL and PL/SQL will be given is SQL queries for Hierarchical retrieval of data (tree structured data) and Data Dictionary static Views stored procedures and Functions for implementing object level data security COMES: EMPLOYADIATY feer completion of the course, Student will be able to sessign and implement a database schema for a given problem-domain	ty	o stud	ents d	urin
Back FUR Under Condi he L	THER RE or MoU with ucted. In the ab session. Writing Queryit Using s URSE OUT	th Oracle Academy, a programme Oracle Workforce Development Program is programme extensive hands-on training on SQL and PL/SQL will be gist. SQL queries for Hierarchical retrieval of data (tree structured data) and Data Dictionary static Views stored procedures and Functions for implementing object level data security COMES: EMPLOYAND LATY feer completion of the course, Student will be able to lessign and implement a database schema for a given problem-domain create and maintain tables using various PL/SQL statements	ty E	STEL	ents d	

1904GE451		LIFE SKILLS : VERBAL ABILITY	L	T	P	C
			0	0	2	1
COURSE OBJE	CTIVES:					
		prehend and use vocabulary words in their day to day o				
 To apply related s 		reading strategies for interpreting technical and non-to-	echnical doc	uments	used i	n job-
	re students w ten productio	rill be able to use targeted grammatical structures meani	ngfully and	approp	riately i	in ora
		its to arrange the sentences in meaningful unit and to	letermine w	hether	constru	ctions
 Lo enab 		ns to an anse the semences in meaninging thin and to d				
			actualistic Tr			ALLION.
rely on a	ective or pass	ive voice				cuon:
rely on a	ective or pass					cuons
rely on a 5. To App	ctive or pass ly the princip	rive voice oles of effective business writing to hone communication				ction
rely on a 5. To App MODULE I	ly the princip	oles of effective business writing to hone communication	ı skills		6	hours
75. To App MODULE I Introduction - Sy	VOCABU	rive voice oles of effective business writing to hone communication	ı skills		6	hours
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TOTAL: 30 HOURS

COURSE OUTCOMES SKILL DEVELOPMENT COl Construct new words in their day to day communication. CO2 Predict the information swiftly while reading passages. CO3 Elaborate their oral and written communication. CO4 Rephrase the sentences and able to identify the voice of the sentence. CO5 Summarize their knowledge of the best practices to craft effective business documents CO6 Make use of the etiquette in business. REFERENCES:

1. Arun Sharma and Meenakshi Upadhyav, How to Prepare for Verbal Ability and Reading Comprehension for CAT, McGrawHill Publication, Seventh Edition 2017

2. R S Aggarwal and Vikas Aggarwal, Quick Learning Objective General English, S.Chand Publishing House, 2017

3. Dr.K. Alex , Soft Skills, S. Chand Publishing House, Third Revise Edition, 2014

4. Raymond Murphy, Essential English Grammar in Use, Cambridge University press, New Delhi, Third Edition, 2007

> Dr. S. RAMABALAN, M.E., Ph.D., PRINCIPAL

E.G.S. Pillay Engineering College, Thethi. Nagore - 611 002

Nagapattinam (Dt) Tamil Naga.

ENVIRONMENTAL SCIENCE 1901MCX01 (Common to all Branches of B.E/B.Tech) 0 PREREQUISITES: 1. Basic knowledge about the valuable environment 2. Basic knowledge to conserve this precious environment COURSE OBJECTIVES: SKILL DEVELOPMENT Realize the interdisciplinary and holistic nature of the environment. Understand how natural resources and environment affect the quality of life and stimulate the quest for sustainable development 3 Recognize the socio-economic, political and ethical issues in environmental science. MODULE I | ECOSYSTEMS AND BIODIVERSITY 10 Hours Concept of an ecosystem - structure and function of anecosystem - producers, consumers and decomposers-Oxygen cycle and Nitrogen cycle - energy flow in the ecosystem - ecological succession processes -Introduction, types, characteristic features, structure and function of the (a) forest ecosystem (b) grassland ecosystem (c) desert ecosystem (d) aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries) -Introduction to biodiversity definition: genetic, species and ecosystem diversity - value of biodiversity: consumptive use, productive use, social, ethical, aesthetic and option values - hot-spots of biodiversity - threats to biodiversity: habitat loss, poaching of wildlife, man-wildlife conflicts - endangered and endemic species of India – conservation of biodiversity: In-situ and ex-situ conservation of biodiversity. Documentation of the medicinal plants in your native place MODULE II NATURAL RESOURCES 10 Hours Forest resources: Use and over-exploitation, deforestation, case studies- timber extraction, mining, dams and their effects on forests and tribal people - Water resources: Use and overutilization of surface and ground water. dams-benefits and problems - Mineral resources: Use and exploitation, environmental effects of extracting and using mineral resources, case studies - Food resources: World food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity, case studies - Energy resources: Growing energy needs, renewable and nonrenewableenergysources, use of alternate energy sources. Energy Conversion processes - Biogas - production and uses, anaerobic digestion; case studies - Land resources: Land as a resource, land degradation, man induced landslides, soil erosion and desertification - role of an individual in conservation of natural resources — Equitable use of resources for sustainable lifestyles. Documentation of the effect of modern Agriculture in your nearby Village MODULE III ENVIRONMENTAL POLLUTION 9 Hours Definition - Source, causes, effects and control measures of: (a) Air pollution - Mitigation procedures- Control of particulate and gaseous emission, Control of SOx, NOx, CO and HC) -Technology for capturing CO2 (metallo organic frame works)(b) Water pollution - Waste water treatment processes. (c) Soil pollution - soil waste management, causes, effects and control measures of municipal solid wastes - (d) Marine pollution (e) Noise pollution (f) Thermal pollution (g) Nuclear hazards-role of an individual in prevention of pollution - pollution case studies Dogumentation at the filesal pulleted site. Liber / Bural / Industrial / Agricultural. MODULE IV SOCIAL ISSUES AND THE ENVIRONMENT From unsustainable to sustainable development - uroan problems related to energy - water conservation, rain water harvesting, watershed management -environmental ethics: Issues and possible solutions - 12 Principles of green chemistry - consumerism and waste products - environment protection act - Air act - Water act -Wildlife protection act - Forest conservation act - The Biomedical Waste (Management and Handling) Rules; 1998 and amendments- scheme of labeling of environmentally friendly products (Ecomark) central and state pollution control boards- disaster management: floods, earthquake- Public awareness. Analyze the recent steps taken by government of India to prevent pollution (Green India and Clean India) MODULE V HUMAN POPULATION AND THE ENVIRONMENT Population growth, variation among nations - population explosion - family welfare programme - environment and human health - human rights - value education - HIV / AIDS - women and child welfare - Environmental

Documentation study of the Human health and the environment in nearby Hospital (Statistical report)

TOTAL: 45 HOURS

PRINCIPAL

E.G.S. Pillay Engineering Goilege,

ATTESTED

impact analysis (EIA) -GIS-remote sensing-role of information technology in environment and human health -

Case studies.

Thethi, Nagore - 611 00%.
Nagapattinam (Dt. Tarritt Mailt)

V SEMESTER

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DEPENDENT					
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COURSE OBJEC	1. Get familiar and understand the fundamental notation in o	L'amaia ana	1		_
	Explore the concepts of counting principle and graph theo		шешы	res.	_
	Understand and demonstrate the basic concept of an algor		12	2"	2.
	combinatorial mathematics.	nunn and i	s appu	Callon	ım
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	ation, equivalence relation, Poset, Function logic, Proposition log ed quantifiers – Rules of inference - Proofs methods and strateg		tes and		
Module II	INDUCTION AND COMBINATORICS			9 Ho	urs
	uction — In the basics of counting — The pigeon hole principle — F currence relation — Generating function — Principle of inclusion :			ombir	atio
Module III	CRAPH			9 Ho	urs
	hs — Operation on graph — Matrix representation of graph, path as uler and Hamilton's paths and graph.	nd connects	dness	– Graj	ph
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PREREQUIST				114	
	1. Software Engineering				
	2. Programming Concepts				
COURSE OBJ					
	 To develop background knowledge as well as core expertise i System. 	n objec	t orien	ted	
	To provide the importance of the software design process.				
	Learn the basics of OO analysis and design skills the UML de	esign di	agrams	š.	
Module I	UML DIAGRAMS			9 Hot	
	OOAD – Unified Process UML diagrams – Use Case – Class Diagram		raction	Diag	ram
	s – Activity Diagrams – Package-Component and Deployment Diagran	115			
Module II	DESIGN PATTERNS			9 Hou	Portal III
	design methodology - GRASP: Designing objects with responsibilities				
	pert - Low coupling -Controller - High cohesion - Designing for			oF de	Sig
	ter - Singleton - Factory - Strategy - Composite - Facade and observer	pattern			1850
ModuleIII	APPLYING DESIGN PATTERNS		22	9 Hor	2011-07
	ce diagrams - Relationship between sequence diagrams and use case				
	diagram - UML class diagrams - UML interaction diagrams - Finding				
A STATE OF THE PARTY OF THE PAR	sses - Associations - Attributes - Domain model refinement - F	maing	concel	orual	cla
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	gregation and Composition	140,150	-		-
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Module V Mobile Synci Mobile Devi Sync4J Synci Mobile Agen	MOBILE SYNCHRONIZATION AND MOBILE DEVICES Consists in Mobile Computing Cystems Cynchronization, Cynchronization Protocols, Sync- Synchronization Language for aronized Multimedia Markup Language (SMIL). Mobile Devices: Sert. Application Server, Gateways, Portals, Service Discovery, Device Markup Language (SMIL).	Indexin mizatio r Mobi ver and	ation ng Teo n Sor ile Co il Mar	of I chaiq 11 H	Oata- ues. ours e for ting
Module V Mobile Synci Mobile Devi Sync4J Synci Mobile Agen	MOBILE SYNCHRONIZATION AND MOBILE DEVICES ces, Synchronization Protocols, Sync- Synchronization Language for aronized Multimedia Markup Language (SMIL). Mobile Devices: Ser L. Application Server, Gateways, Portals, Service Discovery, Device Marystems, Security.	mizatio r Mob ver and magem	n Soriale Colored Margent,	of I hmiq 11 H hware ompu	Data- ues. ours e for ting, nent-
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1902CS551		CASE TOOLS LAB	L	T	P	C
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PREREQUI	1. Software Engi	NACON T				
	2. Programming					
COURSE OF	BJECTIVES:	Concepts	-			_
COURSE O		4	4 4 4			_
		the importance of object-oriented analysis and de				
		w we apply the process of object-oriented analysis	and design t	o som	ware	
	developmen	III	164	or.	•	
TREALER		he necessary knowledge and skills in using object	r-onented CA	SE to	ols.	
	PERIMENTS:				NATION IN SEC	onoscono
		ment and statement of work.	1 1			
		SRS document. Also develop risk management an	a project plan	1		
		elop the Use Case model.		H-y-y-		
		ies and develop an UML Activity diagram.	41			
5. Identity t	he conceptual class	ses and develop a domain model with UML Class	diagram.			
		os find the interaction between objects and represe	ent them usin	g UM	L	
- Allert Control of the Control of t	on diagrams					
	State Chart diagra					
		Domain objects, and Technical services. Draw the	e partial layer	ed, lo	gical	
		ML package diagram notation				
	mponent and Deple					
10. Practice i	torward engineerin	g and reverse engineering				
CITED OF THE	D D 03 () T = -	n L mar and area	TOTAL	4	5 HO	UK5
		R MINI PROJECT				
	utomation System					
	Teller Machine	And the second s				
3. Book bank				ta b	39.	
4.Exam Regis						
	itenance system.					- 6
6.E-ticketing		*		10.5		
7.Software Pe	ersonnel manageme	ent System	m Market de Se			
8. Recruitmen	+ Cambrana					
o recrumen	i System					
	AL EXPERIMEN	TS / INNOVATIVE EXPERIMENTS:				
	AL EXPERIMEN 1. Credit card P	rocessing				113
	AL EXPERIMEN 1. Credit card P					
ADDITIONA	AL EXPERIMEN 1. Credit card P 2. Library Man	rocessing lagement System.	8			
ADDITIONA	AL EXPERIMEN 1. Credit card P	rocessing	, Eclipse IDE	and J	Modu	le
ADDITIONA	AL EXPERIMEN 1. Credit card P 2. Library Man	rocessing lagement System.	, Eclipse IDE	and J	Modul	le
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ADDITIONA	AL EXPERIMEN 1. Credit card P 2. Library Man D SOFTWARE	Rational Suite (or) Argo UML (or) equivalent			Modul	
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SUGGESTE TOOLS COURSE OF CO2 CO3	1. Credit card P 2. Library Man D SOFTWARE UTCOMES: After completion Design and imple Recognize the ro Apply appropriat	Rational Suite (or) Argo UML (or) equivalent. EMPLOYA BILLITY ENTREPRENE ORCHI of the course, Student will be able to ement projects using OO concepts. le and function of each UML model in developing te design patterns.	Dr. S. RAN	TIE MARI	STELL	I, M.E
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1902CS552		MOBILE APPLICATION DEVELOPMENT LAB	L	T	P	C
			0	0	2	1
PREREQUISI	TES:	Computer Programming Languages: Java				Ž.
COURSE						
OBJECTIVES	S:					
	1. To	explore about the structure of mobile development framew	ork			
	2. To	analyze the issues of mobile application				
		develop the dynamic application using various parts of and	troid p	roject	S	
List of Experi						
		active application with different layout managers				
		tions with Multiple Activities and a Simple Menu using vari	ious Vi	ew o	ptions	1
		cation for calculator operation	7/	11.12.11		
		cation that implements multi thread concepts		VIII 9		
Develo	pp an appli	cation using all Google map API functionalities				
		mic application that implements database manipulation	DO FO			
	A CONTRACTOR OF THE PERSON NAMED IN	a oriented application using A/V function				
		cation that writes data to the SD card.				
		cation that creates an alert upon receiving a message.				
10. Develo	p an senso	or based application for ballgame sensor	_		100000000000000000000000000000000000000	
			Tot	al:	30 H	our
Additional Ex						
		velop an application that makes use of RSS Feed.				
COVERNO OVE		rite a mobile application that creates alarm clock.	UNI ASI I			
COURSE OU			.HIP	4		
CO1		letion of the course, Student will be able to	_			
· CO2		derstand the working of mobile application development				
CO3		aphrase the multiple activity options in one application		-	-	
CO4		derstand the background data processing about the application				
CO5		dyze the inter-thread communication between the activities cribe about the sensor implementation in android	and ru	ncno	ns	
REFERENCE		cribe about the sensor implementation in authord				
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		mmers: An App-Driven Approach by Paul J. Deitel, Harvey edition 2015	Dene	I, AI	exano	ier
		Development in 24 Hours, by Carmen Delessio, Lauren Da ng; 4 edition 2015	rcey,	Shan	e	
	ookbook: F	Problems and Solutions for Android Developers by Ian Darv	vin Sh	off/C	Reill	y;
	Android P	rogramming with Android Studio by J. F. DiMarzio Wiley p	oublica	tion l	Fourtl	1
		ATTESTED /				_

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Thethi, Nagore - 611 002.
Nagapattinam (Dt) Tamil Nadu,

1902MCX03	ESSENCE OF INDIAN IRADITIONAL KNOWLEDGE	D I I
	EMPLOYABILARY	2 0 0 0
MODULEI	INTRODUCTION TO CULTURE	6 Hours
Culture, civilization, culture and literature, Indian Culture, Ancier	Culture, civilization, culture and heritage, general characteristics of culture, importance of culture in human literature, Indian Culture, Ancient India, Medieval India, Modern India	ulture in human
MODULEII	INDIAN LANGUAGES, CULTURE AND LITERATURE	6 Hours
Indian Languages and Litera philosophies, other Sanskrit Indian languages & literature	nture-I: the role of Sanskrit, significance of scriptures to literature, literature of south India Indian Languages and	current society, Indian Literature-II: Northern
MODULEIII	RELIGION AND PHILOSOPHY	6 Hours
Religion and Philo Movements in Moo	Religion and Philosophy in ancient India, Kehgion and Philosophy in Medieval India, Religious Reform Movements in Modern India (selected movements only)	ious Reform
MODULEIV	FINE ARTS IN INDIA (ART, TECHNOLOGY& ENGINEERING)	6 Hours
Indian Painting, In Drama, Indian Arc science in ancient,	Indian Painting, Indian handicrafts, Music, divisions of Indian classic music, modern Indian music, Dance and Drama, Indian Architecture (ancient, medieval and modern), Science and Technology in India, development of science in ancient, medieval and modern India	an music, Dance and ndia, development of
MODULEV	EDUCATION SYSTEM IN INDIA	6 Hours
Education in ancies of Ancient India, S	Education in ancient, medieval and modern India, aims of education, subjects, languages, Science and Scientists of Ancient India, Science and Scientists of Medieval India, Scientists of Modern India.	nence and Scientists
	TOTAL	AL 30 Hours
REFERENCES: 1. KapilKapoor, "T 2. "Science in Sam	EFERENCES: KapilKapoor, "Text and Interpretation: The India Tradition", ISBN: 81246033375, 2005 "Science in Samskrit", SamskritaBharti Publisher, ISBN 13: 978-8187276333, 2007	
3. NCERT, "Positi	NCERT, "Position paper on Arts, Music, Dance and Theatre", ISBN 81-7450 494-X, 200	
 S. Narain, "Exar SatyaPrakash, "F 	S. Narain, "Examinations in ancient India", Arya Book Depot, 1993 SatyaPrakash, "Founders of Sciences in Ancient India", Vilay Kumar Publisher, 1989	
6. M. Hiriyanna, "I	"Essentials of Indian Philosophy", MotilalBanarsidass Publishers, ISBN 13: 978-8120810990,	3: 978-8120810990,

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PRINCIPAL

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Nagapattinam (Dt) Tamil Nadii

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1904GE551	LIFE SKILLS: APTITUDE – 1	LT	P	C
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 To be ab To be ab time tak To enha 	n up problem solving skill and to improve intellectual skill of the students ole to critically evaluate various real life situations by resorting to Analysis Of key issues ole to demonstrate various principles involved in solving mathematical problems and the en for performing job functions nee analytical ability of students nent logical and critical thinking of Student			
MODULE I	INTRODUCTION TO NUMBER SYSTEM, BASIC SHORTCUTS OF ADDITION, MULTIPLICATION, DIVISION	F	6 H	lours
divisions involv	d numbers — Types of Numbers - Divisibility rules - Finding the units digit - Finding rem ring higher powers - LCM and HCF Models - Fractions and Digits — Square, Square root ts of addition, multiplication, Division.			ube
MODULE II	RATIO AND PROPORTION, AVERAGES		6 H	lours
Proportion, Me	and - Propernes of Kanos - Companson of Kanos - Problems on Ratios - Compound Rat an proportional and Continued Proportion Definition of Average - Rules of Average - Pr lems on Weighted Average - Finding average using assumed mean method.			is on
MODULE III	PERCENTAGES, PROFIT AND LOSS		6 H	lours
articles sold at s	ng price - Discount and Marked Price - Two different articles sold at same Cost Price same Selling Price - Gain% / Loss% on Selling Price. CODING AND DECODING, DIRECTION SENSE ame set of letters - Coding using different set of letters - Coding into a number - Problem		6 H	lours
	ns by drawing the paths - Finding the net distance travelled - Finding the direction - Prob adows - Problems on direction sense using symbols and notations.	olems	on clo	cks -
MODULE V	NUMBER AND LETTER SERIES NUMBER AND LETTER ANALOGIES, ODD MAN OUT		6 H	lours
Miscellaneous Problems on let	es - Product series - Squares series - Cubes series - Alternate series - Combination series series - Place values of letters - Definition of Analogy - Problems on number analogy tter analogy - Problems on verbal analogy - Problems on number Odd man out - Problem an out - Problems on verbal Odd man out	7 -		•
	TOTA	T	30 H	lours
On the succe	SKILL DEVELOPMENT ssful completion of the course, students will be able to			
	ners should be able to understand number and solving problems least time using various	shorte	uts	
CO2 Com	pare two quantities using ratio and proportion, Solve problems on Partnership, Mixture least time using shortcuts and apply real life situations	A STATE OF THE PARTY OF	10000	on and
	ns should be able to understand the concept behind Average and Percentage.	E B		
	kout concepts of Coding and Decoding, ability to visualize directions and understand ence.	the lo	gic be	hind a
	ners should be able to find a series the logic behind a sequence.			
1. Arun S 2016.	S: ATTESTE harma, 'How to Prepare for Quantitative Aptitude for the CAT', 7th edition, McGraw Hi	ils put		

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	synta: gener		oles, intermediate	machine	repulsent	ations :	and ac	tual o	code
		nderstand optimization schemes.	ation of codes, 1	run time	environn	nent an	id des	ign o	ode
Module I	DETRODIE	TION TO COLD	OT PDC				18	9 H	Victoria.
Control of the Contro		TION TO COMP -Language process				Towns	-	THE RESERVE OF THE PARTY OF THE	ours
		-Language process - The Phases of Co							
Grouping of Ph	ases-Compiler	Construction Tools	 Applications of 	Compiler	Technolo	gy			
PORT OF THE PROPERTY AND ADDRESS OF THE PROPERTY ADDRE	LEXICAL	the conference of the contract						9 H	
		e lexical analysis -							
		erator- LEX- Finite		ılar Expre	ession to a	n NFA	- Con	versio	m of
		on of DFA based po	attern matchers.						
Module III	SYNTAX A			N. T. Carlo				9 H	STATISTICAL
Need and Role	or me ranser	SOURCE STRIN	mars - Writing a (Grammar	- Top-Do	wn Pars	ing-R	lecurs	ive-
		Parser Generators-	YACC		n to LR p	-			
Module IV	SYNTAX-DI	Parser Generators- RECTED TRANS	YACC SLATION & RUN	N TIME	ENVIRO	NMEN	Г	9 H	ours
Module IV Syntax directed	SYNTAX-DI Definitions-C	Parser Generators- RECTED TRANS onstruction of Syr	YACC SLATION & RUN HEX Tree-Bottom-	N TIME	ENVIRO	VMEN S-Attrib	T L	9 He	our:
Module IV Syntax directed	SYNTAX-DI Definitions-C ctive translator	Parser Generators- RECTED TRANS onstruction of Syr - Type Systems-	YACC SLATION & RUN HEX Tree-Bottom-	N TIME	ENVIRO	VMEN S-Attrib	T L	9 He	our:
Module IV Syntax directed Design of predi Expressions-Ty	SYNTAX-DI Definitions-C ictive translator pe Conversions	Parser Generators- RECTED TRANS onstruction of Syr - Type Systems-	SLATION & RUN max Tree-Bottom- Specification of a	N TIME up Evan simple ty	ENVIRO anon of pe check	NMEN 5-Attrib er-Equiv	T utte-D	9 He efiniti e of T	our: ons- Type
Module IV Syntax directed Design of predi Expressions-Typ Runtime environ Heap Managem	SYNTAX-DI Definitions-Co ctive translator pe Conversions nments -Storage ent-Introduction	Parser Generators- RECTED TRANS onstruction of Syr — Type Systems- te organizations-sta on to Garbage Colle	VACC SLATION & RUN stax Tree-Bottom- Specification of a ck allocation of spection.	N TIME: up Evalu simple ty ace –Acc	ENVIRONATION OF STREET	NMEN 5-Attrib er-Equiv	T utte-D	9 He efiniti e of T	our: ons- Type
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PREREQUIS	ITES:						
	Basic know	ledge in HTML tags & skill of creatin	g web pages should	i be kı	MANUE.		
		tals of Programming and Network	ng & Knowledge	of t	asic	Comp	nuter
		software is also necessary.			110		
COURSE OB.							
		e new concepts in Web Technologies					
		understanding about the different tech L, Perl, Rails and PHP	nologies used in the	e Worl	d Wid	le We	b
	atroduction					+3H	ours
XHTML Evolu	ntion of HTML ar	d XHTML- Standard XHTML Docur	nent Structure- Bas	ic Tex	t Mar	kup-	
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Module II X	ML		Topic Parket		9	+3 H	ours
Introduction to	SGML - features	of XML - XML as a subset of SGMI	. – XML Vs HTMI	- Vi	ews of	an X	ML
documents – D Creating XML	ifferent forms of	fL Document Structure – Namespaces markup that can occur in XML docum ng XML Data in HTML browser – Co ML applications	ents - Document T	ype de	clarat	ions -	
Module III	PERL				9	+3H	ours
Control Statem	ents- Fundamenta	and their Operations – Assignment Sta als of Arrays – Hashes REFERENCES	5- Functions- Patter				
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And the second s		ams in Perl -Using Perl for CGI Prog	ramming.				
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Dr. S. RAMABALAN, M.E. Ph.D.,

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Svilabus | Course Outcomes

The course assumes no prior skill or background in design, art, engineering, or prototyping. It is open to all undergraduates and graduate and arthering what is interest in learning design thinking, and is especially recommended for those students planning social-venture and other kinds of design interventions. COURSE OBJECTIVES: The Course Assume the Course of the Course of the prototes	3 0 0 3
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ntinue idvani el can use cu	
ntimue idvani el can use cu	5 Hours
el can el can use cu	us on value proposition of business
el can use cu	6 Hours
use cu	s, Continued customer discovery and
use cu	pothesis through customer discover-
inimum Viable Product/Validation: Product market fit, use customer discovery in defining the MVP, Build Proof Of Concepts f ses. Focus on metrics of business model canvas. Odule VI Business Models Business Models	5 Hours
	Of Concepts for specific customer use
	7 Hours
	el canvas. Start customer validation
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Dr.S.	Dr. S. RAMABALAN, M.E., Ph.B.,
E.G.	E.G.S. Pillay Engineering College. Thethi, Nagore - 611 002.

		WEB TECHNOLOGY	L	T	P	C
			3	0	0	3
PREREQUIS		Basic Computer Knowledge, Networks	10.01		8	1
Course Obje	_					
		impart the new concepts in Web Technologies				
		develop understanding about the different technol	ogies used in	the W	orld	
		ide Web including XML, Perl, Rails and PHP				
	The state of the s	ming, Visual Programming, Database managemen	t systems.	-	10000	
Module I	INTRODU					ours
		AL and XHTML Standard XHTML Document Str				
		sts- Tables- Forms- Frames. Cascading Style Shee				
		le Specification Formats- Selector Forms- Property				
	ACCOUNT OF THE PARTY OF THE PAR	 Color- Alignment of Text – Background Images- 	Span and Div	Tags		
Module II	The state of the s					ours
		atures of XML - XML as a subset of SGML - XM				an
		f XML-XML Document Structure - Namespaces-				
		nt forms of markup that can occur in XML docume		nt Typ	pe	
		IL DTDs – Displaying XML Data in HTML brows	er	-		
Module III	NAME AND ADDRESS OF THE OWNER, TH					ours
		alars and their Operations - Assignment Statement				
		ts-Fundamentals of Arrays – Hashes - Functions-1	Pattern Match	mg-	sump	e
	The state of the s	ed for CGI Programming			-	1
Module IV	1 10 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2					
Origin and Us	e of PHP- Or	verview of PHP- General Syntactic Characteristics			ressi	
Origin and Us Control Stater	e of PHP- Or	verview of PHP- General Syntactic Characteristics - Functions-Pattern Matching- Form Handling- Fil			ression Trac	003-
Origin and Us Control States Module V	nents-Arrays	- Functions-Pattern Matching- Form Handling- Fil	es-Cookies-So	ession	Trac 9 H	ons- king ours
Origin and Us Control States Module V	nents-Arrays		es-Cookies-So	ession	Trac 9 H	ons- king ours
Origin and Us Control States Module V	nents-Arrays	- Functions-Pattern Matching- Form Handling- Fil	es-Cookies-So wograms in pl	ession hp and	Trac 9 H	ons- king ours ql.
Origin and Us Control States Module V Basics, ques	nents-Arrays	- Functions-Pattern Matching- Form Handling- Fil	es-Cookies-So	ession hp and	Trac 9 H	ons- king ours ql.
Origin and Us Control States Module V Basics, ques	ments- Arrays MvSOL ry design & fi	- Functions-Pattern Matching- Form Handling- Fil unctions, database operations, procedures, simple p	es-Cookies-So wograms in pl	ession hp and	Trac 9 H	ons- king ours ql.
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Origin and Us Control Stater Module V Basics, quer COURSE OUTCOMES CO1 CO2 CO3	MvSOL y design & fi After comp Develop we Apply XMI	Functions-Pattern Matching-Form Handling-File anctions, database operations, procedures, simple pattern procedures, simple pages using basic HTML Lechniques in web design	es-Cookies-So mograms in pl Total:	ap and	9 H d mys	ours ours ours
Origin and Us Control States Module V Basics, ques COURSE OUTCOMES CO1 CO2 CO3 CO4	MvSOL y design & fi After comp Develop we Apply XMI Implement Implement	Functions-Pattern Matching-Form Handling-File anctions, database operations, procedures, simple pattern of the course, Students will be able to be pages using basic HTML techniques in web design CGI using Perl PHP & MySQL database connectivity for real wor	mograms in pl Total: Dr. S. F	Pillay	9 H d mys 45 H TTE	ours ours ours
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1902CS652		WEB TECHNOLOG	GY LAB	L	T	P	C
				0	0	2	1
PREREQUISITE	S:	Basic knowledge in HTML to be known .	igs & skill of cre	ating we	b pag	es sh	oul
		Fundamentals of Programmi basic Computer hardware and so			Knov	wledg	e o
COURSE OBJEC	TIVES:	STREET, No. STREET, LANSING MARTINIS CONTRACTOR OF	acres as more and				
1.	Learn to de	velop webpages using HTML and	CSS		L		1/4/
2.		with advanced programming such					
3.	Know to us	e AJAX in implementing Rails		W/ 13			
List of Experimen	nts:						
 Basic Program 	is using HTM	L					
Programs usin	g cascading s	tyle sheets					119
Programs to cr							
		ML as data store					
Programs usin							
	CONTRACTOR OF THE PARTY OF THE	IP & MySQL database connectivity	y				
Programs usin				T-Vino			
Programs usin							
Programs usin	g Rails						
10. Case Study: C	reate a web a	pplication for the given problem st	atement	S	5725		
				1 ot	al:	45 H	our
Additional Exper				177	100		
	1. Program	ns for Rails with AJAX					
and the same of the same		ns to implement JSON					
COURSE OUTC		EMPLOYABILITY					
		n of the course, Student will be able	e to				
COI		web pages using basic HTML			To Day		
CO2		CML techniques in web design					
CO3		ent CGI using Perl					
· CO4	Implem	ent PHP & MySQL database coun-	ectivity for real v	world app	dicati	ous	
CO5	Use AJ.	AX with Rails					
REFERENCES:							
 Deitel & I 	Deitel, Nieto,	Lin, Sadhu, XML How to Program	, Pearson Educat	ion Nev	v Dell	hi, 20	11
 Kogent Le 2009 	serning Soluti	ons Inc, Web Technologies Black l	Book, Dreamtech	ı Press, l	Vew I	Delhi,	Es .
 Chris Bate Delhi, 200 		amming Building Internet Applicat	tions 3rd ed., Wi	ley India	Editi	on, N	lew
	rd, Michael M ,New Delhi,	foncur, Sams Teach Yourself Ajax. 2009.	, JavaScript and l	PHP, Per	erson		
		ll Kahate, Web Technologies TCP/ Hill Education Private Limited, Net		and Java	Progr	ramm	ing
Pankaj Sh	arma, Introdu	ction to Web Technology, Katson l	Books, New Dell				
	atel, Lal Biha mited, New D	ri Barik, Introduction to Web Tech elhi, 2009	nology & Interne	t, Acme	Lean	ning	
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Thethi, Nagore - 611 002.
Nagapattinam (Dt) Tamil Nade:

1902CS651		CO	MPILER LABORATO	ORY	L	T	P	C
					3	0	0	3
PREREQUISITES		C programming	g language.					
COURSE OBJECT	TIVES:			10/4/2011				
	compiler	•	writing tools. Learn t		the diffe	rent l	Phase	s of
		imple optimization						
	10.20.00	The option	a recurring					
LIST OF EXPERI	MENTS			19 10 19 19 19				
1. Implementation of	DATE OF THE PERSON NAMED IN	ole	THE REAL PROPERTY OF THE PARTY OF	CONTRACTOR OF STREET			THE REAL PROPERTY.	
operators etc.)			terns in C. (Ex. identifie	rs, constants, o	omment	5,		
3. Implementation of								
expression that us letter followed by	ses operator + any number (, - , * and /. b) Pro of letters or digits.	categories. a) Program to recognize a vali d)Implementation of Ca	d variable whi doulator using	ch starts LEX an	with.	2	
		cc form and write	code to generate Abstrac	rt Syntax Tree				
Implement type c								
Implement contro					17020			
 Implement any or Construction of I 		ocation strategies(F	Heap, Stack, Static)			Whee	1540	
assembly langua	age instruction	is that can be asser	akes the three address combled and run using a 80 sub, jump. Also simple	086 assembler.	The targ	get		
					Total:	45	Hou	rs
and Compiler writin terminals or more. I	ng tools 30 No LEX and YAC	s. (or) Server with	STUDENTS: Standalon a C / C++ compiler and 0					
Additional Experi								13
	1. Implen	nentation of Simpl	le Code Optimization Te	chniques (Cor	stant Fo	lding.	, etc.)	
COTTON OFFICE	A CEC	7				AT	TES	TED
COURSE OUTCO	The second secon	Em PLOY			-	1	10	1
	1. I 2. 2 3. 0 4. 0	Implement the diffi Analyze the contro Optimize a given p Generate an asse	rse, Student will be able erent Phases of compiler of flow and data flow of crogram mbly language program	r using tools a typical progr	E.G.S. F to a Take	PR Pillay Miniel	INCI Engin	PAL eering (
REFERENCES:		program			Maga	Jatuni	וווו (טנ) ramii
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1. 1. S. AUG-MUSIA	ia, at. Magdo	u-isinai, and ri1	. с.н., темпик пошт	aa , AMLDO	as Puber	mers,	2012	
University Press, 20)12.		ience of algorithms th		e of dat	a", C	ambr	idge
			ic perspective", MIT Pre					
			Learning, Springer, 20		2015			
			arning", Cambridge Un					
		CONTRACTOR OF THE AMERICAN CONTRACTOR	Foundations of Machine	Learning", M	II Press	, 201	Z.	
7. T. M. Mitchell, "								
S. Russel and P. 1	Norvig, "Artif	ficial Intelligence:	A Modern Approach", 7	hird Edition, 1	Prentice	Hall,	2009.	

1904CS653	SOFTWARE	PROTOTYPE DEVE	ELOPMENT LAB	L	T	P	C
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	EMPLOYADILITY	ENTREPRENEURSHIP	SKILL DEVELOPMENT				
COURSE OBJE	CTIVES:		DOMESTIC OF THE PARTY OF THE PA	000000000000000000000000000000000000000		3.	
l.To highli	ght the importance of	oftware Development a	and design and its limitat	ions			
2.To show l	how we apply the proc	ess of software develop	ment.				
3 To provid	le the necessary knowle	edge and skills in using	Software Development	Cool			

Software prototyping is the activity of creating prototypes of software applications, i.e., incomplete versions of the software program being developed.

The purpose of a prototype is to allow users of the software to evaluate developers' proposals for the design of the eventual product by actually trying them out, rather than having to interpret and evaluate the design based on descriptions. Software prototyping provides an understanding of the software's functions and potential threats or issues.[1] Prototyping can also be used by end users to describe and prove requirements that have not been considered, and that can be a key factor in the commercial relationship between developers and their clients.

The process of prototyping involves the following steps

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1. Identify basic requirements

Determine basic requirements including the input and output information desired Details. Thethi, Nagore - 611 002. such as security, can typically be ignored. Nagapattinam (Dt) Tamil Nadu.

Develop initial prototype

The initial prototype is developed that includes only user interfaces. (See Horizontal Prototype, below)

The customers, including end-users, examine the prototype and provide feedback on potential additions or changes.

4. Revise and enhance the prototype

Using the feedback both the specifications and the prototype can be improved. Negotiation about what is within the scope of the contract/product may be necessary. If changes are introduced then a repeat of steps #3 and #4 may be needed.

Tools: Efficiently using prototyping requires to have the proper tools and a staff trained to use those tools. Tools used in prototyping can vary from individual tools, such as 4th generation programming languages used for rapid prototyping to complex integrated CASE tools. 4th generation visual programming languages like Visual Basic and ColdFusion are frequently used since they are cheap, well known and relatively easy and fast to use. CASE tools, supporting requirements analysis, like the Requirements Engineering Environment are often developed or selected by the military or large organizations. Object oriented tools are also being developed like LYMB from the GE Research and Development Center. Users may prototype elements of an application themselves in a spreadsheet.

As web-based applications continue to grow in popularity, so too, have the tools for prototyping such applications. Frameworks such as Bootstrap, Foundation, and AngularJS provide the tools necessary to quickly structure a proof of concept. These frameworks typically consist of a set of controls, interactions, and design guidelines that enable developers to quickly prototype web applications.

Tools such as InVision, Adobe Experience Design, Origami, Sketch, Axure, Web Flow, Framer, Atomic, Principle, Just in Mind, BalSamiq Mockups, are also can be used for prototyping.

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In order to provide the experi	experiential learning to the students, shall take efforts to arrange at least two industrial	sast to	vo ind	netria	1	
visit / field visits in a year. A p	mesentation l	neste	r and	detims	a	
credit may be awarded.						

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1702CS701	CRYPTOGRAPHY AND NETWORK SECURITY	L	T	P	C
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PREREQUI					
	Computer Networks				
0 01:	Basic knowledge of Number theory and finite field elements.				100
Course Obje		and the second			
	 To know the principles and methods of conventional and advanced algorithms. 				
	To learn the techniques used for message authentication and confidence.	entiali	ty mai	ntena	nce
	 To understand the network security tools and applications 				
			-	- 14-	
UNIT I	INTRODUCTION				ours
Computer Se	nurity Concepts - OSI Security Architecture - Security Attacks - Services -	Mech	anism	5 - M	odel
for Network	Security - Classical Encryption Techniques - Symmetric Cipher Mod	del -	Subst	itutio	n –
Transposition	Techniques - Basic Concepts in Number Theory and Finite Fields - Divi	isibilit	y and	Divi	SIOI
	Suclidean Algorithm - Modular Arithmetic.		1	A **	
	SYMMETRIC CIPHERS	umer .		100000000000000000000000000000000000000	ours
	Principles - Data Encryption Standard (DES) - DES Example - Strength of E				
	malysis - Block Cipher Design Principles - Advanced Encryption Standard				
RC5	ons - Key Expansion - AES Example - Pseudorandom Number Generation	and 5	ream	Ciph	215 -
1.196/2022/01	ASYMMETRIC CIPHERS & KEY MANAGEMENT			9 H	ours
	ers - Fermat's and Euler's Theorems - Testing for Primality - Chinese remin	der th	eoren		
Logarithms -	Public-Key Cryptography and RSA - Diffie-Hellman Key Exchange - K	ey M	anage	ment	and
	Symmetric Key Distribution Using Asymmetric Encryption - Distribution of				
Certificates -	Public Key Infrastructure.				
UNIT IV	CRYPTOGRAPHIC DATA INTEGRITY ALGORITHMS				ours
Cryptographi	Hash Functions - Applications - Two Simple Hash Functions - Requirement	s and	Securi	ty Ha	sh
	ed on Cipher Block Chaining - Secure Hash Algorithm (SHA) - SHA-3 - Me				
	irements - Functions - Security of MACs - MACs based on Hash Function	ms: H	MAC	- Di	gital
	Digital Signature Standard (DSS) - Kerberos- Electronic Commerce Security			nes al	
UNITV	NETWORK AND INTERNET SECURITY				DULES
Transport Lev	el Security - Web Security Issues - Secure Sockets Layer (SSL) - Transport I	ayer:	Securi	ty (T	LS)-
	are Shell (SSH) - Electronic Mail Security - Pretty Good Privacy (PGP) - S/1	MIME	- IP :	Securi	ity -
Firewalls- Vir	uses and worms			anni.	
		al:		45 H	MILL
Further Read					
	Digital Watermarking and Steganography				
cormon	International Data Encryption Algorithm (IDEA)				
COURSE	EMPLOYABILITY ENTREPRENEURIHIP				
OUTCOMES					
	After completion of the course, Student will be able to	1000		-	
COl	Explain the fundamental principles of cryptographic techniques.				
CO2	Analyze the cryptographic algorithms for symmetric ciphers.				
CO3	Evaluate asymmetric key algorithms and acquire knowledge in key manager	nent.			- 16
CO4	Explain cryptographic data integrity algorithms.				, 3
CO5	Identify the issues and protocols in network security.				19
References:					
1. Willi Educ	am Stallings, Cryptography and Network security Principles and Practices, 6t ATTEST	b editi	on, P	erson	
The second secon	am Stallings, Network security essentials - application and standards, President	Hell	of Inc	lia,2	010
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1702CS702	SOFTWARE PROJECT MANAGEMENT	_ T	P	C
		3 0	0	3
PREREQUIST	E:			
-	Software Engineering			-
COURSE OBJ				
	To provide a strong foundation on the concept of software project development	pment		
	To learn the concepts on project management and evaluation. To understand the principles of management and team organization.			
	10 understand the principles of management and team organization.			7
UNITI	PROJECT EVALUATION AND PROJECT LIFE CYCLE		9 H	ours
	oftware projects - Project management vs. product management - stages of			Out 2
	ent – Software project life cycle - Managerial issues.			
UNIT II	ACTIVITY PLANNING AND RISK MANAGEMENT		9 H	ours
Project initiation	- Identifying project - Developing project character - Identifying stack hole	lers	- 93	
	nalysis – Gathering requirements – Requirements types – Project scope plan			
	down structure (RBS) – Manpower planning – Quality planning – Time and			
and the second s	Risk management planning – Procurements for the project.			
UNIT III	COST ESTIMATION TECHNIQUES	3	9 H	ours
Software effort e	stimation techniques: KLOC/SLOC estimation, expert opinion, top-down ar ach, use-case point estimates, object point estimates, Delphi technique – Pro	a inct		
	are quality assurance (SQA) – Software quality control (SQC) – cost of qual			
	ty Metrics – SEI-CMMi model			
UNIT IV	RISK MANAGEMENT AND CONTROL		OTT	
DIVER IN	INDR. MANAGEMENT BIND CONTROL		9 H	OULTS
CONTRACTOR OF THE PARTY OF THE	roject risk management process – risk management planning – identification	of	9 H	ours
Understanding P risks – risk analy	roject risk management process – risk management planning – identification sis – risk-response planning – Monitoring the risks – Role of project manag	er —	9 H	ours
Understanding P risks – risk analy Leadership style	roject risk management process — risk management planning — identification sis — risk-response planning — Monitoring the risks — Role of project management is s — recruitment process — team development stages — Conflict management is	er —	911	ours
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PREREQUISITI	Database management Systems	1 3	10	1 0	3
COURSE OBJE					
	Be exposed to big data		ille.		Jan
	Learn the different ways of Data Analysis				
	Learn the mining and clustering		THE.		
	Be familiar with the data streams and visualization				
UNIT I	INTRODUCTION TO BIG DATA			9 H	our
scalability, analyt	g Data Platform — Challenges of conventional systems — Web data ic processes and tools, Analysis vs reporting — Modern data analytic tions, resampling, statistical inference, prediction error.				
UNIT II	DATA ANALYSIS			9 H	our
induction – Neura and neural netwo methods.	l methods, Analysis of time series: linear systems analysis, non il networks: learning and generalization, competitive learning, princ iks; Fuzzy logic: extracting fuzzy models from data, fuzzy decision	cipal com	pone	nt ana stic sa	lysi: arcl
UNIT III	MINING DATA STREAMS			9 H	our
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oneness in a wind real time sentimer UNIT IV Mining Frequent memory — Limits Hierarchical — K-based clustering in UNIT V MapReduce — Had Visualizations — V FURTHER REA COURSE OUTC CO1 CO2 CO3 CO4 CO5	ow – Decaying window – Real time Analytics Platform(RTAP) apput analysis, stock market predictions. FREQUENT ITEMSETS AND CLUSTERING itemsets – Market based model – Apriori Algorithm – Handling and Pass algorithm – Counting frequent itemsets in a stream – Means – Clustering high dimensional data – CLIQUE and PROCethods – Clustering in non-euclidean space – Clustering for streams FRAMEWORKS AND VISUALIZATION doop, Hive, MapR – Sharding – NoSQL Databases – S3 – Hadoop Disual data analysis techniques, interaction techniques; Systems and analysis techniques, interaction techniques; Systems and Some Signature of the Commerce and Big data for blogs OMES: Engloyers (SICIVY) After completion of the course, Student will be able to Apply the statistical analysis methods. Compare and contrast various soft computing frameworks Design distributed file systems	large da Chisterina TLUS – I and Para Distributes application Total:	ta see Tec	9 H is in lehniquent parm. 9 H system 45 H	our Mai es tter our our

1702CS704	1000	CLOUD COMPUTING	1	L·	T	P	C
				3	0	0	3
PREREQUIS	TTE	Computer Networks					
Course Object		Companel iverworks		-			
Course Object	1.	To understand the differences between traditional of	ionianment and c	lond	Lean	energe bis	
	2	To determine whether existing applications to the o					
		sense					
	3.	To learn how to build a transactional web application	on for the cloud o	or m	igrat	e one	to
UNITI	CLOUI	ARCHITECTURE BASICS			T	9 H	ours
The Cloud -H	ype cycle-	metaphorical interpretation-cloud architecture stand	lards and interope	erabi	ility-		
types; IaaS, Pa	aS, SaaS.	Benefits and challenges of cloud computing, public mabling the cloud.					
UNIT II	1	O END DESIGN	Salar Salar Salar			9 H	ours
Part of Column See . Assessed		rategic alignment and architecture development cyc	le-strategic impa	ct-R	isk i		
financial impa	ct-Busines	s criteria-technical criteria-cloud opportunities —eva erv networks-canacity planning-security architectur	aluation criteria a				
UNIT III		APPLICATION ARCHITECTURES	e and ocsegn			0.11	ours
		nus for service development, Amazon, Azure, Goog	de Ann cloud ple	reform	na im		T. C. C. C.
UNIT IV		O MOVE APPLICATION INTO THE CLOUD		ILLUE	111	_	ours
		- Machine Image Design-privacy design - Database		-	-	YIL	Put >
UNIT V		ALIZED CLOUD ARCHITECTURE	шапавещеш		1	O TT	ours
metrics &SLA			Total:			45 H	ours
Further Read	ling:				2		
		Data Analytics, Cloud Cryptography	Water State of the				
COURSE OUTCOMES		EMPLOYABILITY	1 Janes	17		120	07
o c c c c c c c c c c c c c c c c c c c	1	impletion of the course, Student will be able to	W		-		
CO1		and the differences between traditional and Cloud d	enloyment			-	
CO2		and technical and business viability of migrating ex		e to	clon	d	
CO3		cloud applications on AWS and Azure	July apparented	2.00	Carrie	nus.	
CO4		and build cloud based applications					= 1
CO5	The second second second	scalable cloud environment for elastic demands					
References:	Taranga .	Author: Cloud Chyliolanicht for Classic delianus					
1. John l	Rhoton ,Cl recursive	loud Computing Explained: Handbook for Enterpris	e Implementation	n 20	13 e	dition	,
Rajku	marBuyya	, Christian Vecchiola, S.ThamaraiSelvi, Mastering (ogramming, MorganKaufmann, Elsevier publication		Fo.	nındı	ations	and
3. Thom	as Erl, Zai	ghamMahmood, and Ricardo Puttini, Cloud Compu RENTICE HALL, 2013		echn	olog	y &	
4. Reese	, G (2009)	Cloud Application Architectures: Building Application, CA: O'Reilly Media, Inc. (2009).			ture i	in the	
		n/courses/106/105/106105167/	ATTESTED	1	_		

The FF - Import Tree? 122 Happartwon (Cly Twell Linds. Dr. S. RAMABALAN, M.E., Ph.D.,

SvIlabus | Course Outcomes

1703FD001	STARTUP ENTREPRENEURSHIP	IT	[]	0
		3 . 0		8
PREREQUISITE	TE:			
Dr. S. I	bac	nates and venture a	graduate nd other l	spui
COURSE OBJ	OBJECTIVES: EMPLOYABILITY / ENTREPRENTEUR MAP			
MI PI	1. Understand the terminology and conceptual models used in design disciplines			
TEABRIN	2. Understand how teaching and learning occurs in the design process		2-3	
AL	3. Recognize the ethical and social dilemmas and obligations of the practice of design			
AN	4. Diagnose common adoption barriers in individuals, groups and organizations.			
-	5. Develop a design theory from independent and qualitative research and observations			
E., F	6. Participate in and lead innovation in creative and collaborative settings			
Ph.D	7. Undertake complex and unstructured problem-solving challenges in unfamiliar domains			
Module I	Startup Basics		10	Hours
Startup basics (Startup basics overview, Indian Startup Ecosystem, Problems - Identification, Selection, Evaluation, Validation, Teaming			
Module II	Customer Discovery Process		7	Hours
Customer Disc presentation an	Customer Discovery Process, Opportunity Identification, Evaluating Opportunities, Customer discovery with at least 15 interviews. Results presentation and hypothesis refinement. Focus on customer segments of the business model canvas.	Results		
Module III	Ideation		10	5 Hours
Ideation - Brain model canvas.	Ideation - Brainstorming, Technology driven Ideation, Continued customer discovery and updates to hypothesis. Focus on value proposition of business model canvas.	oposition	of busine	SSS
Module IV	Market Analysis		9	6 Hours
Marfeet Analysis	Market Analysis - Perform market research, Competitive advantage landscape, Market Size, Go-To Market Strategies, Continued customer discovery and updates to hypothesis. Focus on channels of business model canvas.	ustomer	hiscovery	and
	Mid-term presentation on startup idea, refined hypothesis through customer discovery	ngh custo	omer disc	viery.
Module V	Minimum Viable Product		10	5 Hours
Minimum Viat	Minimum Viable Product/Validation: Product market fit, use customer discovery in defining the MVP, Build Proof Of Concepts for specific customer usecases. Focus on metrics of business model canvas.	or specifi	c custom	er use-
Module VI	Business Models		7 Hours	SIM
Business Mode phase.	Business Models/Metrics - Chosen business model for the venture, Focus on key resources/activities of business model canvas. Start customer validation phase.	rt custom	er validat	ion .

PREREQUISITE : 1. Basic knowledge of Internet Programming		0	0	3
Basic knowledge of Internet Programming			1	
Basic knowledge of Internet Programming	1			-
				_
Distributed Systems COURSE OBJECTIVES:		_	20 1	
1. Learn XML fundamentals.	-			
Be exposed to build applications based on XML.				
3.Understand the key principles behind SOA	-			
5.0 delistand the key principles beinnd 50A				
UNIT I INTRODUCTION TO XML			9 H	lour
XML document structure - Well formed and valid documents - Namespaces - DTD -X-File	5.	-	- 41	
UNIT II BUILDING XML- BASED APPLICATIONS		1	0 F	lours
XML Schema - XML Transformation and XSL - XSL Formatting - Modeling Databases in 3	V.M.	ET.	-	
UNIT III SERVICE ORIENTED ARCHITECTURE	D.LYVI	1	0 F	our
Characteristics of SUA, Companing SUA with Chem-Server and Distributed architectures -	Rei	nefit		
- Principles of Service orientation - Service layers.				
UNIT IV WEB SERVICES			0 H	our
Service descriptions - WSDL - Messaging with SOAP - Service discovery - UDDI	- 0	Inch		
Choreography –WS Transactions				
UNIT V BUILDING SOA-BASED APPLICATIONS		1	0 T	our
Service Oriented Analysis and Design - Service Modeling - Design standards and guidelines	_			-
Composition - WS-BPEL - WS-Coordination - WS-Policy - WS-Security				
TOTAL:	1	4	5 HO	URS
FURTHER READING / CONTENT BEYOND SYLLABUS / SEMINAR :			THE WAY	LITTER CO.
Web page designing using xml concepts				
2. Advanced WS security policies				
COURSE OUTCOMES: EMPLOYABILITY ENTREPRENEURSHIP				
After completion of the course, Student will be able to				
CO1 Build applications based on XML.				
CO2 Develop web services using technology elements.				
CO3 Describe real-world scenarios involving web services				
CO4 Describe the need for a platform-independent service contract (WSDL)				
CO5 Describe the need for a platform-independent messaging format (SOAP).				
REFERENCES:				
 Peter S. Pacheco, "An Introduction to Parallel Programming", Morgan-Kauffman/Elsevie 		4	05	
 Darryl Gove, "Multicore Application Programming for Windows, Linux, and Oracle Solar Pearson, 2011 		,		
3. John L. Hennessey and David A. Patterson, "Computer Architecture - A Quantitative TED	~	1		
Approach", Morgan Kaufinann / Elsevier, 5th edition, 2012.	1	7		

Dr. S. RAMABALAN, M.E., Ph.D., PRINCIPAL

1702CS751		LOUD COMPUTING LABORATORY		L 0	T 0	P 2	1
PREREQUIS		Computer Networks		1	1 1 1 1 2 1		
COURSE OB					4.		
		d to tool kits for setting up cloud environment					
	The second secon	se Hadoop					
	Be familia	r with developing applications on cloud					
List of Experi	ments:						
1. Study	the installation p	rocedure of openstack or opennebula to set up :	a private clo	oud			
		he virtual machine of different configurations. d at particular time	Check how	many	virtu	al	
Find p		h virtual block to the virtual machine and checl	whether it	holds	the d	lata e	ven
4. Install	a C compiler in	the virtual machine and execute a sample progr	am.		NED I		7711
		ne migration based on the certain condition fro		to the	othe	r.	1
		ll storage controller and interact with it.			10-1		S.
		p the one node Hadoop cluster.					
		sdoop cluster using FUSE.					
		the API's of Hadoop to interact with it.	7 4 1 4 1	3111		-	
		gram to demonstrate the use of Map and Reduc	e tasks	1			
	and the same of th			Lot	al:	45 H	oui
Additional Ex	periments:						
	1. Laune	and configure a virtual machine in AWS clou	ıd				
	2. Install	a public webserver in the VM launched in AW ywhere		s the	webpa	age fr	om
COURSE OU	TCOMES:	EMPLOYABILITY			74.7	17/2	
100	After complete	on of the course, Student will be able to					
CO1		p private cloud.		151.5	Harris		
CO2	Setup Hadoop			HIE			
CO3	Design and Im	plement applications on cloud		1000		6.67	
References:					les.		
		ng Explained: Handbook for Enterprise Impler	nentation 20)13 ed	lition,	2013	١,
Applications Pr	rogramming, Mo	Vecchiola, S.Thamarai Selvi,Mastering Cloud C gan Kaufmann,,Elsevier publication, 2013					
Archit	ecture, PRENTI						
		Application Architectures: Building Applicati A: O'Reilly Media, Inc. (2009).	ons and Inf	iastru	cture :	in the	

Dr. S. RAMABALAN, M.E., Ph.D.,

1702CS752	NETWORK SECURITY LABORATORY	L	T 0	P 2	C 1
PREREQUIS	ITE Computer Networks	10	U	Z	1
COURSE OB					
	1. To impart practical knowledge on network security concepts and me	chanis	ms.		
	Experiment and analyze important cryptographic algorithms				1531
	3. Experiment security algorithms with efficiently implement key exch	amere s	algoni	rhm	
	4. Learn to use network security tools like GnuPG, KF sensor, Snort.				
List of Experi					
	the following SUBSTITUTION TECHNIQUES:	Name and Address of the Owner, where	NAME OF STREET		DESCRIPTION
a) Caesar (
b) Playfair					
c) Hill Cip					
d) Vigenes	e Cipher				
2. Implement	the following TRANSPOSITION TECHNIQUES:				
A) Rail fer	nce - row & Column Transformation				
3. Implement	the following algorithms				
a) DES					
b) RSA Al					
c) Diffiee-	Hellman				
d) MD5					
e) SHA-1					
	the Signature Scheme – Digital Signature Standard				
Demonstra signatures	te how to provide secure data storage, secure data transmission and for cre (GmpG)	ating	digita		
6. Setup a ho	ney pot and monitor the honeypot on network (KF Sensor)				
7. Installation	of rootkits and study about the variety of options				
	te intrusion detection system (ids) using any tool (snort or any other s/w)		19-7		
	on Snort Installation and Setup.		5		
10. Case Study	on Wireshark Installation and Setup.				
		Tot	al:	45 H	ours
Additional Ex	periments:				
	 Configure SSH (Secure Shell) and send/receive a file on this concorrectness of this system using the configured parameters. 	nectio	n to	verify	the
	2. Perform Simple experiments using the sniffer mode, the packet l	ogger	mode	a and	the
	Network Intrusion Detection mode of Snort.	-			
COURSE OU	TCOMES: EMPLOYABILITY ENTREPRENEUR WHLP				
201	After completion of the course, Student will be able to			6	
CO1	Implement the cipher techniques.				
CO2	Gain practical experience of designing and implementing network se	curity	algor	ithms	and
CO3	protocols 3. Use different open source tools for network security and analysis				
Software Requ	A STATE OF THE PARTY OF THE PAR	STE)	9	
	r equivalent compiler GnuPG usor or Equivalent	00	27	7	
		A L A	X NO F	Ph D	
4. Snort	umbler or Equivalent Dr. S. RAMABA	CLEAN	, IVI.E	., FII.D	.,
5. Wiresl		ineeri	na Co	llege.	
The second secon	or WinIDS AIO software pack E.G.S. Pillay Eng. Thethi, Nag	ore - 6	11 007	-	
References:	Nagapattinam	(Dt) Ta	in:		
DOMESTIC CONTROL OF THE PARTY O	ohy and Network Security" by William Stallings 6th Edition, Pearson Educ				
	snort.org/docs/snort mamaal/	anatoli.			
	ack.com/docs/papers/IDS/snort_rules.htm.html				

1704CS753	SOFTWARE DEVELOPMENT LABORATORY L	T P	0
	(MINI PROJECT III) 0	. 0 .	Т
	EMPLOYABILITY ENTIRE PRENEURIHAP SKILL DEVELOPHEN		
PREREQUISITE			
	. Object Oriented Analysis & Design		
COURSE OBJECTIVES:	ECTIVES:		
	 To highlight the importance of Software Development and design and its limitations 	Innitatio	ns
	To show how we apply the process of software development.		
	To provide the necessary knowledge and skills in using Software Development Tools.	pment To	sols.
LIST OF EXPERIMENTS:	ERIMENTS:		
1. Identification	Identification of Use cases for each application system and SRS preparation.		
2. Formulate 1	Formulate Domain Analysis, Elaboration through Modeling and Implementation through state of the art	te of the	art
technology available.	wailable.		
3. Coding/Cr	Coding/Customizing/Wrapping for components/subsystems		
4. Testing - !	Testing - Scenario testing and test case preparation for each components/subsystems		
5. Builds the	Builds the spirit of team work in design process.		
6. Integration	Integration of subsystems and Testing		
7. Become pi	Become proficient in the programming languages		
	TOTAL:		45 HOURS
ADDITIONAL EXPERIME	EXPERIMENTS / INNOVATIVE EXPERIMENTS:		
	 More Project Development and Testing. 		+
COURSE OU	OUTCOMES:		
	After completion of the course, Student will be able to		
100	Design and implement projects using Software Components		
C02	Recognize the role and function of each Development model in software System.		
C03	Apply appropriate design patterns.		
- 400 - 400	Create code from design		
500	Compare and contrast various testing techniques		
REFERENCES:	S:		
1.https://www.	1.https://www.knowgravity.com		
2.http://www.win.tue.nl	in tue.nl/		
3. https://www	3. https://www.microconsult.de		3
P. HILLDSALVENTON	THAT ON OTHER MICH. MC		

Dr. S. RAMABALAN, M.E., Ph.D.,
PRINCIPAL

1704GE751	LIFE SKILLS: COMPETITE PREPARATIO		L	T	P	C
			2	0	0	2
COURSE OBJECTI	ES: SKILL DEVELOPM	NENT				-
2. Stud	y the concepts of data structures, algor y the process and implementation of O liar with the database ,network and Ar	perating systems a	nd design	of con	npilers	
THE REAL PROPERTY OF THE PERSON NAMED IN	ursion. Arrays, Stacks, Queues, Linked				D:-:	
Conquer – Dynamic Pr	 Sorting - Asymptotic worst case time ogramming 	ie and space compi	exity – G	reedy	- DW	ne d
Computer Organizati Memory merarchy - 10	on: Digital logic, Machine instructions Interface	- Addressing mode	es - Hazai	rds – P	ipelini	ng
	Processes - Threads - Inter-proc					
synchronization – Dea	llock - CPU scheduling - Memory man	agement and virtu:	al memor	y - File	e syster	115
Databases: ERmodel -Normai forms -Transa	Relational model: Relational algebra, ctions and concurrency control	Tuple Calculus - S	QL - Inte	grity c	onstra	ints
- IPv4/IPv6 - Routing	Layering – Categories – Topology - F TCP – UDP – Application layer prote matures and certificates.					
Compiler Design: The	ory of Computation - Lexical analysis, - code generation	parsing, syntax di	rected tra	nslatio	m -	
	Knowledge representation, Knowled Planning with state-space search –					
					: 30 H	oui
ASSESSMENT PATT		AT	TESTE	Do		
	uous Assessment Only)	6	1	-	*	
Test I		Dr. S. RAM	ARAIA	N. M.E.	ph.B.	
Test I	.25	Dr. S. KAIVI	PINCIPA	1		

Final Examination 50

Total Marks 100

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E.G.S. Pillay Engineering College, Thethi, Nagore - 611 002.

Nagapattinam (Dt) Tamil Nadu.

REFERENCES:

1. M.A.Weiss, Data Structures and Algorithm Analysis in C, Pearson Education Asia, 2015.

- Carl Hamacher, ZvonkoVranesic and SafwatZaky, Computer Organization, McGraw-Hill, Third Reprint 2015.
- Abraham Silberschatz, Peter Baer Galvin and Greg Gagne, "Operating System Principles", John Wiley & Sons (Asia) Pvt. Ltd., Ninth Edition, 2013.
- Alfred V. Aho, Ravi Sethi and Jeffrey D. Ullman Compilers: Principles, Techniques and Tools, 2nd Edition, Pearson, 2012.
- Abraham Silberschatz, Henry F. Korth and S. Sudarshan, Database System Concepts, McGraw -Hill, 2015.
- Behrouz A. Forouzan, Data Communication and Networking, 5th Edition, Tata McGraw-Hill, 2014.
- 7. Elaine Rich And Kevin Knight Artificial Intelligence, 2nd Edition, Tata Mcgraw-Hill

1703CS804	BIO INFORMATICS	L	T	P	C
Course Obje	efirms.	3	0	0	3
Course Obje					100
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TTZe T	To let the students know the Sequence alignments		- 1	0.77	
Unit I	GENOMICS Project Parch and Final Parch of Harman Communication	Same C	To the San of		ours
	nes, Human Genome Project, Rough and Final Draft of Human Genome Pro ect, Vectors: plasmids, Cosmids, bacteriophage, M13 vectors, BAC, YAC at				
	IA polymerase, restriction endonucleases, topisomerase I and DNA ligase,				
	ne phosphatase, nuclease, RNAse. Application of gene technology, Gene Sile				
and gene ther		mring,	Cleme	n.more	t Out
Unit II	GENOME DATABASES AND GENE EXPRESSION AND	Di	1.4	0 II	ours
	MICROARRAY				
	sequences. Sequence databases: GeneBank, European Molecular Biology				
	quence databank, Introduction, Basic steps for gene expression, genome in				
	ing sequences (CDS), untranslated regions (UTR's), cDNA library, exp				
	for microarray analysis; soft-finder, xCluster, MADAM, SAGE, Applic	ations	of n	nicros	ITAY
technology.		-			
Unit III	PROTEOMICS	-			ours
	Enzymes; Proteomics classification; tools and techniques in proteomics; g				
	GE, isoelectric focusing, affinity chromatography, HPLC, ICAT, fixing a				
	scopy for protein analysis, MALDI-TOF, Electro spray ionization (EST),	land	em 1	mass
	(MS/MS) analysis; tryptic digestion and peptide fingerprinting (PMF).		-	-	
Unit IV	SEQUENCE ALIGNMENTS	M			ours
	Protein sequences, physicochemical properties based on sequence, sequence				
THE RESERVE AND DESCRIPTION OF THE PERSON NAMED IN COLUMN TWO	nment, gaps, gap-penalties, scoring matrices, Smith-Waterman and Needlems			1	
Control of the Contro	alignments, multiple sequence alignment, comparision, composition a		100 VC		
And the second s	astalW, BioEDIT, BLASTp, Phylogenetic analysis tools- Phylip, ClustalW	, Onin	ie buj	logei	ienc
analysis.	IMMUNOINFORMATICS			0 TT	7,146
The second secon			TT-J	120000	OULL
The second secon	mxanon, suucture and crasses or antibodies, genetic basis of antibody div				-
	structure and antigen presentation, T and B lymphocytes activation and ro				
	nunity. Vaccines live and attenuated, killed, multi-subunit and DNA vaccines	. нуре	rsens	nvity	and
amo immune	diseases. ELISA, RIA, Hybridoma Technology.			40.TT	
Further Read	To	tat:	190	45 H	ours
ruither Kend					
					- 4
	Introduction about Genetic Algorithms Generation to do for Principles			14.	
£	2. Computing tools for Bio informatics				- 2
Course Outc	2. Computing tools for Bio informatics omes: EMPLOYA BUTY				
Course Outc	2. Computing tools for Bio informatics omes: EMPLOYA BUTY After completion of the course, Student will be able to				
Course Outc	2. Computing tools for Bio informatics omes: EMPLOYA BUTY After completion of the course, Student will be able to 1. Practice life-long learning of applied biological science				
	2. Computing tools for Bio informatics omes: EMPLOYA BUTY After completion of the course, Student will be able to	& hov	to us	e the	m.
References:	2. Computing tools for Bio informatics omes: EMPLOYA BUTY After completion of the course, Student will be able to 1. Practice life-long learning of applied biological science 2. The students would have learnt about tools used in Bio informatics			e the	n.
References:	2. Computing tools for Bio informatics omes: After completion of the course, Student will be able to 1. Practice life-long learning of applied biological science 2. The students would have learnt about tools used in Bio informatics ogy: Current Progress Volume 1 by P. N. Cheremisinoff and L. M. Ferrante.			e the	m.
References: 1. Biotechnol Publishing Co	2. Computing tools for Bio informatics omes: After completion of the course, Student will be able to 1. Practice life-long learning of applied biological science 2. The students would have learnt about tools used in Bio informatics ogy: Current Progress Volume 1 by P. N. Cheremisinoff and L. M. Ferrante. Inc.			e the	m.
References: 1. Biotechnolo Publishing Co 2. Bergey's M	2. Computing tools for Bio informatics omes: EMPLOYA BUTY After completion of the course, Student will be able to 1. Practice life-long learning of applied biological science 2. The students would have learnt about tools used in Bio informatics ogy: Current Progress Volume 1 by P. N. Cheremisinoff and L. M. Ferrante. Inc. Inc. Inc. Inc. Inc. Inc. Inc. Inc.			e the	m.
References: 1. Biotechnolo Publishing Co 2. Bergey's M 3. The Search	2. Computing tools for Bio informatics omes: After completion of the course, Student will be able to 1. Practice life-long learning of applied biological science 2. The students would have learnt about tools used in Bio informatics ogy: Current Progress Volume 1 by P. N. Cheremisinoff and L. M. Ferrante. Inc.	Techno	omic,	e the	m.

Dr. S. RAMABALAN ME Ph.D..
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B.E Computer and Science Engineering | E.G.S. Pillay Engineering College (Autonomous) Regulations 2017
Approved in II Academic Council Meeting held on 05-05-2018

		DATA CENTRE AND VIRTUALIZATION		L 3	0	P 0	3
PREREQUI	SITE:						-
	1. Computer	Networks					
		Organization and Architecture					
Course Obje		The second secon					
		lerstand the Phases of Journey to the Cloud.					
		cribe the Key Elements of Classic Data Center.					
	3. Unc	lerstand the Concepts of Virtualized Data Center			11111		_
Unit I		TO THE CLOUD				8 H	our
Business Driv	vers for Cloud	Computing, Definition of Cloud Computing, Charac	cteristics of	Cloud	l Con	aputir	
		a Transitioning from Classic Data Center to Cloud Co	omputing En	viron	ment	-	
Unit II		DATA CENTER (CDC)				9 H	
		Center, Compute, Storage and Networking, Object					ge
		ntinuity Overview, Backup, Replication Technologie	s and CDC I	Mana			
Unit III		ZED DATA CENTER (VDC) orage Virtualization, Network Virtualization Technic				11 H	
Desktop Virt Consideration		ir Benefits, and Considerations, Application Virtua	alization Me	thods	, Ber	efits,	and
Unit IV	DETCENTEGO				-		
CHRIV	BUSINESS	CONTINUITY IN VIRTUALIZED DATA CENT	TER			8 H	ours
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Dr. S. RAMABALAN, M.E., Ph.D.,

1703CS815		SOCIAL NETWORK ANALYSIS	1 L	T 0	P 0	3
Course Obje	ctives:					
		give the introduction about semantic web and ontology			Tall?	
		apply the concept community structure and human behaviors	s in social	netw	orks	
		implement visualization of social networks.				
Unit I	Introduction	n			9 H	our
		ntic web-development of social network analysis key co structure-macro structure-personal networks-blogs and				
Unit II	Knowledge	representation	A LIER		9 H	our
		web-resource description framework-graph visualizations emparison-ER comparison-xml comparison-web based know			110111111111111111111111111111111111111	wel
Unit III	Modeling ar	nd aggregating			9 H	our
detecting con	The state of the s	etection and mining — applications of community mining al network infrastructures and communities — decentralized	TO THE SHAPE OF THE PARTY OF TH		etwoi	
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Dr.S. RAMABALAN, M.E., Ph.B.,

1704CS851

PROJECT WORK

EVELOPMENT EMPLOYABILITY ENTREPRENEUR SHIP SKILL

Course Objectives:

he student should be made to:

To develop knowledge to formulate a real world problem and project's goals.

3. To identify and learn new tools, algorithms and techniques.

To understand the various procedures for validation of the product and analysis the cost effectiveness.

the satisfaction of the supervisor. The progress of the project is evaluated based on a minimum of three The students in a group of 3 to 4 works on a topic approved by the head of the department under the reviews. The review committee may be constituted by the Head of the Department. A project report is required at the end of the semester. The project work is evaluated based on oral presentation and the project report jointly by guidance of a faculty member and prepares a comprehensive project report after completing the work external and internal examiners constituted by the Head of the Department TOTAL: 180 Hours

E.G.S. Pillay Engineering C Thethi. Nagore - 611 0

To identify the various tasks of the project to determine standard procedures.

To understand the guideline to Prepare report for oral demonstrations.