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

PRINCIPAL

E.G.S. Pillay Engineering College,

ATTESTED

Thethi, Nagore - 611 002. Nagapattinam (Dt) Tamil Nade: 1901GEX03

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.

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

PRINCIPAL

E.G.S. Pillay Engineering College, Thethi, Nagore - 611 002. Nagapattinam (Dt) Tamil Nadu. 1901ENX01

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.

Dr. S. RAMABALAN, M.E. Pho. 45 HOURS

PRINCIPAL

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

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

1

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

ATTESTED

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

E.G.S. Pillay Engineering College,

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.

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

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

1901HSX51

COMMUNICATION SKILLS LAB

TO

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

List of Experiments:

VENET OF MEN

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

PRINCIPAL

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

# ENGINEERING CHEMISTRY LAB

HO

(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

ATTESTED PRINCIPAL .S. Pillay Engineering College, Thethi, Nagoro 611 00? Nagapattinath (644)

1901MA202

## ENGINEERING MATHEMATICS-II

L T P C 3 2 0 4

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.

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

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).

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

PRINCIPAL

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

## 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:

E.G.S. Pillay Engineering College,

ATTESTED

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

L

## 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

B.E. - Computer Science Engineering | E.G.S. Pillay Engineering College (Autonomous) | Regulations 2019 Approved in IV Academic Council Meeting held on 25.05.2019

## 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

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

ATTESTED

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

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.

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

PRINCIPAL

E.G.S. Pillay Engineering College, Thethi, Nagore - 611 002. Nagapattinam (Dt) Tamil Nadu, 1901GE252

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.

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

PRINCIPAL

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.

Dr. S. RAMABALAN, M.E., Ph.D.,
PRINCIPAL
E.G.S. Pillay Engineering College,
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/

E.G.S. Pillay Engineering Co Nagapattinam

Approved in IV Academic Council Meeting Held on 25.05.2019 B.E. Computer science Engineering [E.G.S. Pillay Engineering College (Autonomous) | Regulations 2019

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)

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

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 /		
$(FIFO / N / \infty)$ formulae.	), (M / M / C)	$: (FIFO / \infty / \infty), (M / M / C) : (FIFO / C)$	N / ∞)mo	dels – I	Little's	
Module IV	NETWORK	MODEL			9+3 1	Ionr
Network Constru	ction – Critical	Path Method – Project Evaluation and Review T	echnique -	Resou		
in Network Schee	The second secon		1		200 000 000	-
Module V		TATION AND ASSIGNMENT MODELS			9+3 1	
ontinum solution	- degeneracy	insportation problem- Methods for finding in - Mathematical formulation of assignment mod	nal basic	teasible	solut	OII -
Variants of the A	ssignment probl	- Mathematical formulation of assignment mod	eis – Hun	ganan .	Algont	nm -
This is the st	sagmaent proof	CLLL				
FURTHER REAL	NINC:		Total:	4	5+15	Hour
OKTHER REAL		gramming Problem			-	
	2. Replaceme		-			
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 <sup>rd</sup>
A STATE OF THE PARTY OF THE PAR	tions Research	, Pearson education, Asia, 8th Edition, 2007			2	
		tatistics with Reliability, queuing and Computer	Science A	em licat	ions" 1	ohn
rearry many mount, a	Tourself Tool	Control of the Contro	16	1	7	OTHE
7. Kalavathy S, Op	perations Resear	rch, Second Edition, Vikas Publishing House, 20	04.	1	-	
nptel.ac.in/cour	ses/111105035.	www.nptelvideos.in/2012/11/Mathematics Spik	AMABAI	AN, N	E. Phi	971
	The second secon		PRINC	DAL		_

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

	14.4	DATA STRUCTURES L	T	P	C
		3	2	0	4
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	
array-based i inked lists –	mplementations	on – linked list implementation —singly linked lists- circularly lin of lists –Polynomial Manipulation DATA STRUCTURES – STACK AND QUEUE	ked li	sts- d	oubly
	ay implemen	tation, Linked list implementation, Appacations or stack: Infix to P	ostfix,	Evalu	ation
of Postfix,	Balancing	g symbols, Nested function calls, Recursion, Towe tation. Linked List implementation. Circular Oueue.		f H	
Module III	SORTING	, SEARCHING AND HASH TECHNIQUES		9+3E	lour:
Sorting algori	iums, mseru	ou son - selection son - silen son - buode son - Quick sort- Merg	e sort -	Radio	X SOF
- Searching:	Linear search	h -Binary Search Hashing: Hash Functions - Separate Chaining - O	pen A	ddress	ing -
Rehashing – I		ASDING EAR DATA STRUCTURES - TREES	-	0.07	-
			1	9+3E	
reneral nees	troe transces	gy, Representation of trees, Tree traversal-Binary tree, Represent	anon	Expre	S5101
mee' within k		Binary South Tree Construction Correlate Incoming Dale	da man	6377	-
Rotation Inse	ertion Deletio	al, Binary Search Tree: Construction, Searching, Insertion, Dele	tion,	AVL	trees
Rotation, Inse	ertion, Deletio	on, B-Trees, Splay trees, Red-Black Trees	tion, 2		
Rotation, Inse Module V	NON LINE	on, B-Trees, Splay trees, Red-Black Trees EAR DATA STRUCTURES - GRAPHS		9+3E	lour
Rotation, Inse Module V Representatio Trees – Krus	ertion, Deletion NON LINE on of Graphs skal's and P	on, B-Trees, Splay trees, Red-Black Trees	inimue	9+3H n Spar	lour
Rotation, Inse Module V Representatio Trees — Krus algorithm — F	ertion, Deletion NON LINE on of Graphs skal's and Paloyd - Warsh	on, B-Trees, Splay trees, Red-Black Trees  EAR DATA STRUCTURES - GRAPHS  - Breadth-first search - Depth-nrst search - Topological sort - M  rim's algorithm - Shortest path algorithm - Dijkstra's algorithm	inimu - Be	9+3H n Spar	lour nning Ford
Rotation, Inse Module V Representatio Trees — Krus algorithm — F	ertion, Deletion NON LINE on of Graphs skal's and Pi loyd - Warsh READING	on, B-Trees, Splay trees, Red-Black Trees  EAR DATA STRUCTURES - GRAPHS  - Breadth-first search - Depth-mrst search - Topological sont - Minin's algorithm - Shortest path algorithm - Dijkstra's algorithm will algorithm.  Total:	inimu - Be	9+3E n Spar Ilman	lour nning Ford
Rotation, Inse Module V Representatio Trees – Krus	non LINE n of Graphs kal's and P loyd - Warsh  READING  1. Ap	on, B-Trees, Splay trees, Red-Black Trees  EAR DATA STRUCTURES - GRAPHS  - Breadth-first search - Depth-mrst search - Topological sort - Mrim's algorithm - Dijkstra's algorithm all algorithm.  Total:	inimuu – Be	9+3E n Span Ilman +15 E	lour: nnins -Ford
Rotation, Inse Module V Representatio Trees — Krus algorithm — F	non LINE n of Graphs kal's and P loyd - Warsh  READING  1. Ap	on, B-Trees, Splay trees, Red-Black Trees  EAR DATA STRUCTURES - GRAPHS  - Breadth-first search - Depth-mrst search - Topological sort - Mrim's algorithm - Dijkstra's algorithm all algorithm.  Total:  Ophications of queue: Priority queue, Double ended queue.  Treaded Binary Tree	inimuu – Be	9+3E n Span Ilman +15 E	lour nning Ford
Rotation, Inse Module V Representatio Trees — Krus algorithm — F FURTHER I	non LINE n of Graphs skal's and P loyd - Warsh  READING  1. Ap 2. Th	on, B-Trees, Splay trees, Red-Black Trees  EAR DATA STRUCTURES - GRAPHS  - Breadth-first search - Depth-mist search - Topological sort - Minn's algorithm - Shortest path algorithm - Dijkstra's algorithm all algorithm.  Total:  Ophications of queue: Priority queue, Double ended queue.  Ireaded Binary Tree	inimum – Be	9+3H n Span llman +15 H	lour:
Rotation, Inse Module V Representatio Trees — Krus algorithm — F FURTHER I	ertion, Deletion NON LINE on of Graphs skal's and Poloyd - Warsh  READING  1. Ap 2. Th	on, B-Trees, Splay trees, Red-Black Trees  EAR DATA STRUCTURES - GRAPHS  - Breadth-first search - Depth-mrst search - Topological sort - Mrim's algorithm - Shortest path algorithm - Dijkstra's algorithm sall algorithm.  Total:  Ophications of queue: Priority queue, Double ended queue.  preaded Binary Tree  MPWYARI LITY  Description of the course Student will be able to	inimum – Be	9+3H n Span llman +15 H	lour:
Rotation, Inse Module V Representatio Trees — Krus algorithm — F FURTHER I	n of Graphs skal's and P loyd - Warsh  READING  1. Ag 2. Th	EAR DATA STRUCTURES - GRAPHS  - Breadth-first search - Depth-mrst search - Topological sort - Minn's algorithm - Shortest path algorithm - Dijkstra's algorithm all algorithm  Total:  Depth-actions of queue: Priority queue, Double ended queue.  Depth-actions of queue: Priority queue, Double ended queue.  Depth-actions of the course, Student will be able to	- Be	9+3H n Span llman +15 H	lour:
Rotation, Inse Module V Representatio Trees - Krus algorithm - F FURTHER I	rtion, Deletic NON LINE of Graphs skal's and Pr loyd - Warsh  READING  1. Ap 2. Th  S: After comp	EAR DATA STRUCTURES - GRAPHS  - Breadth-first search - Depth-mist search - Topological sort - Minin's algorithm - Shortest path algorithm - Dijkstra's algorithm all algorithm.  Total:  Ophications of queue: Priority queue, Double ended queue.  Depth of the course, Student will be able to abstract data types for linear data structures.  Dr. S. RAM algorithm - Dijkstra's algorithm - Dijkst	ABAT	9+3H n Span llman +15 H	lour:
Rotation, Inse Module V Representatio Trees — Krus algorithm — F FURTHER I COURSE OUTCOMES	rtion, Deletic NON LINE of Graphs skal's and Poloyd - Warsh  READING  1. Ap 2. Th  S: After comp Implement Apply the d	EAR DATA STRUCTURES - GRAPHS  - Breadth-first search - Depth-mist search - Topological sort - Minin's algorithm - Shortest path algorithm - Dijkstra's algorithm all algorithm.  Total:  Ophications of queue: Priority queue, Double ended queue.  Depth of the course, Student will be able to abstract data types for linear data structures.  Dr. S. RAM algorithm - Dijkstra's algorithm - Dijkst	ABAT	9+3H n Span llman +15 H	lour:
Rotation, Inse Module V Representatio Trees — Krus algorithm — F FURTHER I COURSE OUTCOMES CO1 CO2	rition, Deletic NON LINE on of Graphs skal's and Poloyd - Warsh  READING  1. Ap 2. Th  S: After comp Implement Apply the d Critically as	EAR DATA STRUCTURES - GRAPHS  - Breadth-first search - Depth-mist search - Topological sort - Minin's algorithm - Shortest path algorithm - Dijkstra's algorithm all algorithm.  Total:  Ophications of queue: Priority queue, Double ended queue.  Depth of the course, Student will be able to abstract data types for linear data structures.  Dr. S. RAM algorithm - Dijkstra's algorithm - Dijkst	ABAT	9+3H n Span llman +15 H	lour:
Rotation, Inse Module V Representatio Trees — Krus algorithm — F  FURTHER I  COURSE OUTCOMES  CO1 CO2 CO3 CO4 CO5	ertion, Deletion NON LINE on of Graphs skal's and Poloyd - Warsh  READING  1. Apply the deletion of Graphs Apply the deletion of Graphs Apply the deletion of Graphs Learn advantage of	EAR DATA STRUCTURES - GRAPHS  - Breadth-first search - Depth-mrst search - Topological sort - Minim's algorithm - Shortest path algorithm - Dijkstra's algorithm all algorithm.  Total:  Diplications of queue: Priority queue, Double ended queue.  Diplications of queue: Priority queue, Double ended queue.  Diplications of the course, Student will be able to abstract data types for linear data structures  Dr. S. RAM analyze the various algorithms  E.G.S. Pilla analyze the various algorithms	ABAT	9+3H n Span llman +15 H	lour:
Rotation, Inse Module V Representatio Trees — Krus algorithm — F  FURTHER I  COURSE OUTCOMES  CO1 CO2 CO3 CO4 CO5 REFERENC	rtion, Deletic NON LINE of Graphs skal's and Poloyd - Warsh  READING  1. Ap 2. Th  S: After comp Implement Apply the d Critically as Have a com Learn advantes:	EAR DATA STRUCTURES - GRAPHS  - Breadth-first search - Depth-mrst search - Topological sort - Morim's algorithm - Shortest path algorithm - Dijkstra's algorithm all algorithm.  Total:  Ophications of queue: Priority queue, Double ended queue.  In priority Tree  In provided Binary Tree  Algorithm - Dijkstra's algorithm - Dijkstra's algorithm all algorithm.  Total:  Ophications of queue: Priority queue, Double ended queue.  In priority Argorithm - Dijkstra's algorithm - Dijkstra's algorithm all algorithm.  Total:  Ophications of queue: Priority queue, Double ended queue.  In priority Argorithm - Dijkstra's algorithm - Dijkstra's algorithm - Dijkstra's algorithm algorithm - Dijkstra's	ABAN ABAN RINC V Engli	9+3H n Span Ilman +15 H AN, IPAL neering re -64'	Hour Ford Hour S Cold 1 002
Rotation, Inse Module V Representatio Trees — Krus algorithm — F FURTHER I COURSE OUTCOMES  CO1 CO2 CO3 CO4 CO5 REFERENC 1. M	ertion, Deletion of Graphs skal's and Poloyd - Warsh READING 1. Apply the deletion of Graphs skal's and Poloyd - Warsh READING 1. Apply the deletion of Graphs and Learn advantage of Le	EAR DATA STRUCTURES - GRAPHS  - Breadth-first search - Depth-nirst search - Topological sort - Minn's algorithm - Shortest path algorithm - Dijkstra's algorithm all algorithm.  Total:  pplications of queue: Priority queue, Double ended queue.  preaded Binary Tree    MPWYAG  LITY	ABAN RINC V Engli i, Nago	9+3H n Span Ilman +15 H AN, PAL neering re -64'	Hour M.E g Cold 1 002 mil N
Rotation, Inse Module V Representatio Trees - Krus algorithm - F FURTHER I  COURSE OUTCOMES  CO1 CO2 CO3 CO4 CO5 REFERENC 1. M 2 2. S 2	rition, Deletic NON LINE of Graphs skal's and Pr loyd - Warsh  READING  1. Ap 2. Th  S: After comp Implement Apply the d Critically at Have a com Learn advar ES: Mark Allen W  1011 Seymour Lips 1014.	EAR DATA STRUCTURES - GRAPHS  - Breadth-first search - Depth-rirst search - Topological sort - Morium's algorithm - Shortest path algorithm - Dijkstra's algorithm sall algorithm.  Total:  Total:  pplications of queue: Priority queue, Double ended queue.  preaded Binary Tree  EMPLOYARS LITY  pletion of the course, Student will be able to abstract data types for linear data structures  prehensive the various algorithms  prehensive knowledge of Trees and their implementations  maded data structures like Graphs and their implementation  Weiss, "Data Structures with C°, McGraw Hill Education, Special Inschitz, "Data Structures with C°, McGraw Hill Education, Special Inschitz, "Data Structures with C°, McGraw Hill Education, Special Inschitz, "Data Structures with C°, McGraw Hill Education, Special Inschitz, "Data Structures with C°, McGraw Hill Education, Special Inschitz, "Data Structures with C°, McGraw Hill Education, Special Inschitz, "Data Structures with C°, McGraw Hill Education, Special Inschitz, "Data Structures with C°, McGraw Hill Education, Special Inschitz,"	ABANA	9+3H n Span llman +15 H ED AN, PAL neering re -64' Dt) Tai	Hour Ford Hour Coll 1 002 1 002
Rotation, Inse Module V Representatio Trees — Krus algorithm — F  FURTHER I  COURSE OUTCOMES  CO1 CO2 CO3 CO4 CO5 REFERENC 1. M 2 2 3. A E	READING  Age  After comp  Inplement a  Apply the d  Critically as  Have a com  Learn advar  ES:  After Mark Allen W  1011  1014  101	EAR DATA STRUCTURES - GRAPHS  - Breadth-first search - Depth-rirst search - Topological sort - Morim's algorithm - Shortest path algorithm - Dijkstra's algorithm all algorithm.  Total:  Deplications of queue: Priority queue, Double ended queue.  Deplications of queue: Priority queue, Double ended queue.  Deplications of the course, Student will be able to abstract data types for linear data structures  Definition of the course, Student will be able to abstract data types for linear data structures  Definition of the various algorithms  Definition of the course, Student will be able to abstract data types for linear data structures  Definition of the course, Student will be able to abstract data types for linear data structures  Definition of the course, Student will be able to abstract data types for linear data structures  Definition of the course, Student will be able to abstract data types for linear data structures  Definition of the course, Student will be able to abstract data types for linear data structures  Definition of the course, Student will be able to abstract data types for linear data structures  Definition of the course, Student will be able to abstract data types for linear data structures  Definition of the course, Student will be able to abstract data types for linear data structures  Definition of the course, Student will be able to able to abstract data types for linear data structures  Definition of the course, Student will be able to able to abstract data types for linear data structures  Definition of the course, Student will be able to able to abstract data types for linear data structures  Definition of the course, Student will be able to	ABAN RINC V Engli i, Nago tinam (	9+3H n Span llman +15 H ED AN, neering re 64' Ot) Tail	Hour M.E. Cold 1 002
Rotation, Inse Module V Representatio Trees — Krus algorithm — F  FURTHER I  COURSE OUTCOMES  CO1 CO2 CO3 CO4 CO5 REFERENC 1. 2 2. 3 2. 4 E 4. F	READING  1. Apply the d Critically as Have a com Learn advast ES: Mark Allen W 1. Control of Control Critically as Control Criticall	Total:  Deptiment of the course, Student will be able to abstract data structures to problem solutions.  Deptiment linear data structures to problem solutions.  Deptiment linear data structures to problem solutions.  Deptiment linear data structures and Algorithm Analysis in C", 2nd Edition, Perchata, "Data Structures with C", McGraw Hill Education, Special In Hopcroft and J.D.Ullman, "Data structures and Algorithms", Pearson at 2003.  B.A. Forouzan, "Data Structures", Second Edition, Thomson India Ed.  EAR DATA STRUCTURES - GRAPHS  Total:  Tot	ABANA	9+3H n Span llman +15 H ED AN, PAL neering re -64 Dt) Tall Education, ation,	Hour Ford Hour Coll 1 002 1 002
Rotation, Inse Module V Representatio Trees — Krus algorithm — F  FURTHER I  COURSE OUTCOMES  CO3 CO4 CO5 REFERENC 1. M 2 2. S 3. A 4. F 5. F	rition, Deletic NON LINE of Graphs skal's and Pr loyd - Warsh  READING  1. Ap 2. Th  S: After comp Implement Apply the d Critically at Have a com Learn advar ES: Mark Allen W  1011 Seymour Lips 1014 CV.Aho, J.E. Schittion Reprint CF.Gilberg, I ReemaThareja	EAR DATA STRUCTURES - GRAPHS  - Breadth-first search - Depth-rirst search - Topological sort - Morim's algorithm - Shortest path algorithm - Dijkstra's algorithm all algorithm.  Total:  Deplications of queue: Priority queue, Double ended queue.  Deplications of queue: Priority queue, Double ended queue.  Deplications of the course, Student will be able to abstract data types for linear data structures  Definition of the course, Student will be able to abstract data types for linear data structures  Definition of the various algorithms  Definition of the course, Student will be able to abstract data types for linear data structures  Definition of the course, Student will be able to abstract data types for linear data structures  Definition of the course, Student will be able to abstract data types for linear data structures  Definition of the course, Student will be able to abstract data types for linear data structures  Definition of the course, Student will be able to abstract data types for linear data structures  Definition of the course, Student will be able to abstract data types for linear data structures  Definition of the course, Student will be able to abstract data types for linear data structures  Definition of the course, Student will be able to abstract data types for linear data structures  Definition of the course, Student will be able to able to abstract data types for linear data structures  Definition of the course, Student will be able to able to abstract data types for linear data structures  Definition of the course, Student will be able to able to abstract data types for linear data structures  Definition of the course, Student will be able to	ABANA	9+3H n Span llman +15 H ED AN, PAL neering re -64 Dt) Tall Education, ation,	Hour Ford Hour Coll 1 002 1 002

Signal programme and com-

1902CS302	OBJECT ORIENTED PROGRAMMING	L	T	P	C
		3	0	0	3
	1 2				
PREREQUIST					
COURSE OBJ	2. Introduction to Computer		_		
COURSE OBJ					
	<ol> <li>To demonstrate adeptness of object oriented prog developing solutions to problems demonstrating u abstraction, encapsulation, and inheritance.</li> </ol>	isage	ot d	ata	
	<ol> <li>To understand the concepts behind object-oriented using C++</li> </ol>	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		
			the man	No-	
CO4	Understand the concepts for Java Inheritance, Polymorphism and Java I			-	
CO4 CO5	Understand the concepts for Java Inheritance, Polymorphism and Java I Demonstrate the working of string builder and string buffer in String ha				
CO5	Demonstrate the working of string builder and string buffer in String ha				
CO5 REFERENCES	Demonstrate the working of string builder and string buffer in String ha				
CO5 REFERENCES 1. B. Trivedi, "F	Demonstrate the working of string builder and string buffer in String has:  togramming with ANSI C++2, Oxford University Press, 2007	ndlin	500		03.
CO5 REFERENCES 1. B. Trivedi, "P 2.H.M.Deitel, P	Demonstrate the working of string builder and string buffer in String has cogramming with ANSI C++2, Oxford University Press, 2007  J.Deitel, "Java how to program", Fifth edition, Prentice Hall of India priv	ndlin	500		03.
CO5 REFERENCES 1. B. Trivedi, "F 2.H.M.Deitel, P 3. Ira Pohl, "Ob 4.K.R.Vemugopo	Demonstrate the working of string builder and string buffer in String has togramming with ANSI C++**, Oxford University Press, 2007  J.Deitel, "Java how to program", Fifth edition, Prentice Hall of India priviect-Oriented Programming Using C++**, Pearson Education Asia, 2003.  Rajkumar Buyya, T.Ravishankar, "Mastering C++**, TMH, 2003.	ndlin	500		03.
CO5 REFERENCES 1. B. Trivedi, "P 2.H.M.Deitel, P 3. Ira Pohl, "Ob 4.K.R.Venugopo 5.Herbert Schild	Demonstrate the working of string builder and string buffer in String has regramming with ANSI C++", Oxford University Press, 2007  J.Deitel, "Java how to program", Fifth edition, Prentice Hall of India privilect-Oriented Programming Using C++", Pearson Education Asia, 2003.  Al, Rajkumar Buyya, T.Ravishankar, "Mastering C++", TMH, 2003.  At, "The Java 2: Complete Reference", Fourth edition, TARKE 2002.	ndlin	500		03.
CO5 REFERENCES 1. B. Trivedi, "F 2.H.M.Deitel, P 3. Ira Pohl, "Ob 4.K.R. Venugope 5.Herbert Schild 6. https://nptel.a	Demonstrate the working of string builder and string buffer in String has togramming with ANSI C++**, Oxford University Press, 2007  J.Deitel, "Java how to program", Fifth edition, Prentice Hall of India priviect-Oriented Programming Using C++**, Pearson Education Asia, 2003.  Rajkumar Buyya, T.Ravishankar, "Mastering C++**, TMH, 2003.	ndlin	mite		03.

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				
					3	0	0	3
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.			
					Total:	45	Ho	****
FURTHER RE	ADING /S	FMINAR:	on a street of		Lotali	100	220	MI C
		tions-MIPS-VLIW-H	ow the processors as	a made from silic	on mud-(	Trans	hine	
	Data path		ow are processors as	e made nom sinc	OH HIME-	CIEN	me	
COURSE OUT		EMPLOYABIL	1 + 7		-	-		-
001119101		letion of the course.	Student will be able t	2		-		_
COl		basic operations and		A	TTEST	ED	1	_
CO2		hmetic and logic Mod			100	7	-	_
CO3		analyze pipelined co		Dr. S. RAN	-ADAK	IN	M.E.	Ph
CO4		parallel processing a		Dr. S. RAN	PRINCIP	ΔΙ	1111-	
COS		erformance of memor			Engine	arino	Col	leg
REFERENCE	5:			Then	transa (D)	Tair	61 Pe	:00
		nter Organization and						
<ol> <li>Vincent P. He Education, 2005.</li> </ol>	euring, Hany	F. Jordan, "Compute	er System Architectu	re", Second Editio	on, Pears	on.		
The state of the s	SUNL IN	Architecture and Or	ganization, Design P	rinciples and App	lications	, fir	st	
		"Computer Systems	Davies and Audrie				-	
Pearson Educa	tion 2012	Computer Systems	Design and Architec	ure , and Edition	4			
a carson name	anon, 2012.		The second secon	The second second second second				

PREREQUISITES:    1	1902CS304	DIGITAL LOGIC AND MICROPRO	DCESSORS	L	T	P	C
I. Basic electromics				3	0	2	4
I. Basic electromics							
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						
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  Boolean algebra: Boolean postulates and laws — SUP and POS — E-map — Quine Mc-Cluskey method.  Logic gates: AND OR NOT NAND NOR and YOR sales.  MODULE II COMBINATIONAL LOGIC CIRCUITS  Introduction — adder — subtractor — code converter — multiplexer and de-multiplexer — parity checker and generator — magainude comparator.  MODULE III SEQUENTIAL CIRCUITS  Tynchronous sequential circuits: Latches — flip flops — characteristic table and equation — realization of on hip flop using other flip flop — synchronous counter design.  Asynchronous sequential circuits: Difference between synchronous and asynchronous circuits — synchronous sequential circuits: Difference between synchronous and asynchronous circuits — synchronous counter. design.  Asynchronous sequential circuits: Difference between synchronous and asynchronous circuits — synchronous counter. design.  MODULE IV MICROPROCESSOR 3085 AND 8086  12 Hour MODULE IV MICROPROCESSOR 3085 AND 8086  13 MICROCONTROLLER AND I/O INTERFACING — 12 Hour 1081: Pin diagram — architecture — addressing modes — instruction set — assembly language programming.  MODULE V 3081 MICROCONTROLLER AND I/O INTERFACING — 12 Hour 1081: Pin diagram — architecture — addressing modes — instruction set — assembly language programming.  MODULE V 3081 MICROCONTROLLER AND I/O INTERFACING — 12 Hour 1081: Pin diagram — architecture — addressing modes — instruction set — assembly language programming.  MODULE V 3081 MICROCONTROLLER AND I/O INTERFACING — 12 Hour 1081: Pin diagram — architecture — addressing modes — instruction set — assembly language programming.  MODULE V 3081 MICROCONTROLLER AND I/O INTERFACING — 17 Hour 1081: Pin diagram — architecture — addressing modes — instruction set — assembly language programming.  MODULE V 3081 MICROCONTROLLER AND I/O INTERFACING — 17 Hour 1081: Pin diagram — architecture —	LOURSE O.						
3. Understand the basics of microprocessor and assembly language programming.  MODULE I BOOLEAN ALGEBRA AND LOGIC GATES  30 clean algebra: Boolean postulates and laws - SOP and POS - E-map - Quine Mc-Cluskey method.  Logic gates: AND OR NOT NAND NOR and XOR sates  MODULE II COMBINATIONAL LOGIC CIRCUITS  12 Hour introduction - adder - subtractor - code converter - multiplexer and de-multiplexer - parity checker an generator - magnitude comparator.  MODULE III SEQUENTIAL CIRCUITS  12 Hour bynchronous sequential circuits: Latches - filp flops - characteristic table and equation - realization of on hip flop using other flip flop - synchronous counter design.  Asynchronous sequential circuits: Difference between synchronous and asynchronous circuits - asynchronous counter design.  Asynchronous sequential circuits: Difference between synchronous and asynchronous circuits - asynchronous counter design.  Asynchronous counter dassign - etatic and dynamic hazards.  Introduction - pin diagram - architecture - addressing modes - instruction set - assembly language programming.  MODULE IV MICROPROCESSOR 8085 AND 8086  12 Hour 10051: Pin diagram - architecture - addressing modes - instruction set - assembly language programming.  MODULE V 8051 MICROCONTROLLER AND VO INTERFACING 12 Hour 10051: Pin diagram - architecture - addressing modes - instruction set - assembly language programming.  MODULE V 8051 MICROCONTROLLER AND VO INTERFACING 12 Hour 10051: Pin diagram - architecture - addressing modes - instruction set - assembly language programming.  MODULE V 8051 MICROCONTROLLER AND VO INTERFACING 12 Hour 10051: Pin diagram - architecture - addressing modes - instruction set - assembly language programming.  MODULE V 8051 MICROCONTROLLER AND VO INTERFACING 12 Hour 10051: Pin diagram - architecture - addressing modes - instruction set - assembly language programming.  MODULE V 8051 MICROCONTROLLER AND VO INTERFACING 12 Hour 10051: Pin diagram - architecture - addressing order - 8085.  Sorting of an array in ascending and descen							
MODULE I BOOLEAN ALGEBRA AND LOGIC GATES  Societan algebra: Boolean postulates and laws — SOP and POS — E-map — Quine Mc-Cluskey method.  Logic gates: AND, OR NOT, NAND, NOR and XOR gates  MODULE II COMBINATIONAL LOGIC CIRCUITS  Introduction — adder — subtractor — code converter — multiplexer and de-multiplexer — parity checker an generator — magnitude comparator.  MODULE III SEQUENTIAL CIRCUITS  Synchronous sequential circuits: Latches — flip flops — characteristic table and equation — realization of on hip flop using other flip flop — synchronous counter design.  Asynchronous sequential circuits: Difference between synchronous and asynchronous circuits — synchronous counter design.  Asynchronous sequential circuits: Difference between synchronous and asynchronous circuits — synchronous counter design.  Asynchronous counter design.  Asynchronous acquired design. — static and dynamic between synchronous and asynchronous circuits — synchronous counter design.  MODULE IV MICROPROCESSOR 8085 AND 8086  12 Hour MODULE IV MICROPROCESSOR 8085 AND 8086  12 Hour MODULE W MICROPROCESSOR 8085 AND 8086  13 Study of logic gates.  2 Design of adder and subtracture — addressing modes — instruction set — assembly language programming.  MODULE W MICROPROCESSOR 8085 AND 8086  1. Study of logic gates.  2. Design of synchronous and asynchronous counter.  Microprocessor.  3. Study of logic gates.  2. Design of synchronous and asynchronous counter.  Microprocessor.  4. Implementation of MUX and DEMUX.  5. Implementation of parity checker and generator.  6. Design of synchronous and asynchronous counter.  Microprocessor.  1. Basic arithmetic operations — 8085.  2. Sorting of an array in ascending and descending order — 8085.  3. Stepper motor interfacing — 8085.  4. Inplementation of MUX and DEMUX.  5. Inplementation of parity checker and generator.  6. Design of synchronous and asynchronous counter.  Microprocessor.  1. Basic arithmetic operations — 8086.  12. Arithmetic operations — 8086.  13. The foliation of parity checker and ge					-		
Boolean algebra: Boolean postulates and laws—SOP and POS—E-map — Quine Mc-Cluskey method.  Logic gates: AND OR NOT NAND NOR and XOR sates.  MODULE II COMBINATIONAL LOGIC CIRCUITS  Introduction — adder — subtractor — code converter — multiplexer and de-multiplexer — parity checker any emerator — magnitude comparator.  It Hour bynchronous sequential circuits: Latches — flip flops — characteristic table and equation — realization of on lip flop using other flip flop — synchronous counter design.  Asynchronous sequential circuits: Difference between synchronous and asynchronous circuits — synchronous counter design.  Asynchronous counter design—static and characteristic table and equation — realization of on lip flop using other flip flop — synchronous counter design.  Asynchronous sequential circuits: Difference between synchronous and asynchronous circuits — synchronous counter design.  Asynchronous counter design—static and characteristic table and equation — realization of on lip flops.  MODULE IV MICROPROCESSOR 8085 AND 8086  It Hour 1088: Introduction — put diagram — architecture — addressing modes — instruction set — assembly language programming.  MODULE V 8051 MICROCONTROLLER AND I/O INTERFACING  It Hour 10851: Put diagram — architecture — addressing modes — instruction set — assembly language programming.  MODULE V 8051 MICROCONTROLLER AND I/O INTERFACING  It Hour 10851: Put diagram — architecture — addressing modes — instruction set — assembly language programming.  MODULE V 8051 MICROCONTROLLER AND I/O INTERFACING  It Hour 10851: Put diagram — architecture — addressing modes — instruction set — assembly language programming.  MODULE V 8051 MICROCONTROLLER AND I/O INTERFACING  It Hour 10851: Put diagram — architecture — addressing modes — instruction set — assembly language programming.  MODULE V 8051 MICROCONTROLLER AND I/O INTERFACING  It Hour 10851: Put diagram — architecture — addressing modes — instruction set — assembly language programming.  MODULE V 8051 MICROCONTROLLER AND I/O INTERFACING  It Ho		Onderstand the dasics of finctoprocessor and assembly	ny ranguage pro	Sismin	HE.		
Boolean algebra: Boolean postulates and laws—SOP and POS—E-map — Quine Mc-Cluskey method.  Logic gates: AND OR NOT NAND NOR and XOR sates.  MODULE II COMBINATIONAL LOGIC CIRCUITS  Introduction — adder — subtractor — code converter — multiplexer and de-multiplexer — parity checker any emerator — magnitude comparator.  It Hour bynchronous sequential circuits: Latches — flip flops — characteristic table and equation — realization of on lip flop using other flip flop — synchronous counter design.  Asynchronous sequential circuits: Difference between synchronous and asynchronous circuits — synchronous counter design.  Asynchronous counter design—static and characteristic table and equation — realization of on lip flop using other flip flop — synchronous counter design.  Asynchronous sequential circuits: Difference between synchronous and asynchronous circuits — synchronous counter design.  Asynchronous counter design—static and characteristic table and equation — realization of on lip flops.  MODULE IV MICROPROCESSOR 8085 AND 8086  It Hour 1088: Introduction — put diagram — architecture — addressing modes — instruction set — assembly language programming.  MODULE V 8051 MICROCONTROLLER AND I/O INTERFACING  It Hour 10851: Put diagram — architecture — addressing modes — instruction set — assembly language programming.  MODULE V 8051 MICROCONTROLLER AND I/O INTERFACING  It Hour 10851: Put diagram — architecture — addressing modes — instruction set — assembly language programming.  MODULE V 8051 MICROCONTROLLER AND I/O INTERFACING  It Hour 10851: Put diagram — architecture — addressing modes — instruction set — assembly language programming.  MODULE V 8051 MICROCONTROLLER AND I/O INTERFACING  It Hour 10851: Put diagram — architecture — addressing modes — instruction set — assembly language programming.  MODULE V 8051 MICROCONTROLLER AND I/O INTERFACING  It Hour 10851: Put diagram — architecture — addressing modes — instruction set — assembly language programming.  MODULE V 8051 MICROCONTROLLER AND I/O INTERFACING  It Ho	MODITET	POOLEAN ALCEDDA ANDLOCIC CATES				12 TT	
Logic gates: AND. OR NOT NAND NOR and XOR cates.  MODULE II   COMBINATIONAL LOGIC CIRCUITS   12 Hour introduction — adder — subtractor — code converter — multiplexer and de-multiplexer — parity checker an generator — magnitude comparator.  MODULE II   SEQUENTIAL CIRCUITS   12 Hour Synchronous sequential circuits: Latches — flip flops — characteristic table and equation — realization of on this flop using other flip flop — synchronous counter design.  Asynchronous sequential circuits: Difference between synchronous and asynchronous circuits — synchronous counter design.  Asynchronous counter design — static and dynamic bazards.  MODULE IV   MICROPROCESSOR 8085 AND 8086   12 Hour state — addressing modes — instruction set — assembly language programming.  MODULE V   MICROPROCESSOR 8085 AND 8086   12 Hour state — addressing modes — instruction set — assembly language programming.  MODULE V   8051 MICROCONTROLLER AND TO INTERFACING   12 Hour state — addressing modes — instruction set — assembly language programming.  MODULE V   8051 MICROCONTROLLER AND TO INTERFACING   12 Hour state — addressing modes — instruction set — assembly language programming.  MODULE V   8051 MICROCONTROLLER AND TO INTERFACING   12 Hour state — addressing modes — instruction set — assembly language programming.  MODULE V   8051 MICROCONTROLLER AND TO INTERFACING   12 Hour state — addressing modes — instruction set — assembly language programming.  MODULE V   8051 MICROCONTROLLER AND TO INTERFACING   12 Hour state — addressing modes — instruction set — assembly language programming.  MODULE V   8051 MICROCONTROLLER AND TO INTERFACING   12 Hour state — addressing modes — instruction set — assembly language programming.  MODULE V   8051 MICROCONTROLLER AND TO INTERFACING   12 Hour state — addressing modes — instruction set — assembly language programming.  MODULE V   8051 MICROCONTROLLER AND TO INTERFACING   12 Hour state — addressing modes — instruction set — assembly language programming.  In the programming for the programming for the prop			n Oning Mc (	"hack-our	matho		OUL
Introduction			b - Some we-	Jamey .	шешю	u.	
introduction — adder — subtractor — code converter — multiplexer and de-multiplexer — parity checker and generator — magnitude comparator.    MODULE III   SEQUENTIAL CIRCUITS   12 Hour						12 H	narra
Separator - magnitude comparator.   12 Hour   SEQUENTIAL CIRCUITS   12 Hour   Separator   12 Hour   Separator   13 Hour   14 Hour   15 Hour   15 Hour   15 Hour   16 Hour   16 Hour   16 Hour   17 Hour   18			d de-multiplex	er – nat	ity ch		
Sequential circuits: Latches – flip flops – characteristic table and equation – realization of on this plop using other flip flop – synchronous counter design.   Asynchronous sequential circuits: Difference between synchronous and asynchronous circuits – synchronous counter design – static and dynamic hazards.   Asynchronous counter design – architecture – addressing modes – instruction set – assembly language programming.   Asynchronous – architecture – addressing modes – instruction set – assembly language programming.   MODULE V						-	a total ful
Synchronous sequential circuits: Latches – flip flops – characteristic table and equation – realization of on the flop using other flip flop – synchronous counter design.  Asynchronous sequential circuits: Difference between synchronous and asynchronous circuits — asynchronous counter design — static and dynamic hexands.  MODULE IV MICROPROCESSOR 8085 AND 8086 12 Hours — MICROPROCESSOR 8085: Introduction — pm diagram — architecture — addressing modes — instruction set — assembly language programming.  8085: Introduction — pm diagram — architecture — addressing modes — instruction set — assembly language programming.  8086: Pin diagram — architecture — addressing modes — instruction set — assembly language programming.  8091: Pin diagram — architecture — addressing modes — instruction set — assembly language programming.  8091: Pin diagram — architecture — addressing modes — instruction set — assembly language programming.  8092: Pin diagram — architecture — addressing modes — instruction set — assembly language programming.  8093: Pin diagram — architecture — addressing modes — instruction set — assembly language programming.  8094: Pin diagram — architecture — addressing modes — instruction set — assembly language programming.  8095: Pin diagram — architecture — addressing modes — instruction set — assembly language programming.  8096: Pin diagram — architecture — addressing modes — instruction set — assembly language programming.  8097: Pin diagram — architecture — addressing modes — instruction set — assembly language programming.  8098: Introduction — pin diagram — architecture — addressing modes — instruction set — assembly language programming.  8098: Introduction — pin diagram — architecture — addressing modes — instruction set — assembly language programming.  8099: Pin diagram — architecture — addressing modes — instruction set — assembly language programming.  8099: Pin diagram — architecture — addressing modes — instruction set — assembly language programming.  8099: Pin diagram — architecture — addr	Management of the latest state of the latest s					12 H	our
Asynchronous sequential circuits: Difference between synchronous and asynchronous circuits asynchronous sequential circuits: Difference between synchronous and asynchronous circuits synchronous counter designstateand_shmamin_bazards			table and equa	tion - re	100	The state of the s	100000000000000000000000000000000000000
Asynchronous sequential circuits: Difference between synchronous and asynchronous circuits and dynamic basards.  Asynchronous counter design — static and dynamic basards.  ASYNCHRONOUS COUNTER STATIC and dynamic basards.  ASSOCIATE IV MICROPROCESSOR 8085 AND 8086 12 Hours  BO85: Introduction — pin diagram — architecture — addressing modes — instruction set — assembly language programming.  BO86: Pin diagram — architecture — addressing modes — instruction set — assembly language programming.  MODULE V 8051 MICROCONTROLLER AND I/O INTERFACING 12 Hours  BO51: Pin diagram — architecture — addressing modes — instruction set — assembly language programming.  MODULE V 8051 MICROCONTROLLER AND I/O INTERFACING 12 Hours  BO51: Pin diagram — architecture — addressing modes — instruction set — assembly language programming.  MODULE V 8051 MICROCONTROLLER AND I/O INTERFACING 12 Hours  BO51: Pin diagram — architecture — addressing modes — instruction set — assembly language programming.  MODULE V 8051 MICROCONTROLLER AND I/O INTERFACING 12 Hours  BO51: Pin diagram — architecture — addressing modes — instruction set — assembly language programming.  MODULE V 8051 MICROCONTROLLER AND I/O INTERFACING 12 Hours  BO51: Pin diagram — architecture — addressing modes — instruction set — assembly language programming.  MODULE V 8051 MICROCONTROLLER AND I/O INTERFACING 12 Hours  BO51: Pin diagram — architecture — addressing modes — instruction set — assembly language programming.  12 Hours  BO51: Pin diagram — architecture — addressing modes — instruction set — assembly language programming.  12 Hours  BO51: Pin diagram — architecture — addressing modes — instruction set — assembly language programming.  12 Hours  BO51: Pin diagram — architecture — addressing modes of 8085, 8085 and 8051.	flip flop using	other flip flop - synchronous counter design.					
MODULE IV MICROPROCESSOR 8085 AND 8086 12 Hour 8085: Introduction — pun diagram — architecture — addressing modes — instruction set — assembly language programming. 8086: Pin diagram — architecture — addressing modes — instruction set — assembly language programming. 8081: Pin diagram — architecture — addressing modes — instruction set — assembly language programming. 8081: Pin diagram — architecture — addressing modes — instruction set — assembly language programming. 8081: Pin diagram — architecture — addressing modes — instruction set — assembly language programming. 8081: Pin diagram — architecture — addressing modes — instruction set — assembly language programming. 8081: Pin diagram — architecture — addressing modes — instruction set — assembly language programming. 8081: Pin diagram — architecture — addressing modes — instruction set — assembly language programming. 8081: Pin diagram — architecture — addressing modes — instruction set — assembly language programming. 8081: Pin diagram — architecture — addressing modes — instruction set — assembly language programming. 8081: Pin diagram — architecture — addressing modes — assembly language programming. 8080: 12 Hour set — assembly language programming. 8081: Pin diagram — architecture — addressing modes — assembly language programming. 8081: Pin diagram — architecture — addressing modes — assembly language programming. 8081: Pin diagram — architecture — addressing modes — assembly language programming. 8081: Pin diagram — architecture — addressing modes — assembly language programming. 8081: Pin diagram — architecture — addressing modes — assembly language programming. 8081: Pin diagram — architecture — addressing modes — assembly language programming. 8081: Pin diagram — architecture — addressing modes — assembly language programming. 8081: Pin diagram — architecture — addressing modes — assembly language programming. 8081: Pin diagram — architecture — addressing modes — assembly language programming. 8081: Pin diagram — architecture — addressing modes —	Asynchrono	is sequential circuits: Difference between synchro	onous and as	ynchron	OUS (	circuit	5 -
### Study of logic gates.    Design of code converters.	asynchronous	counter design - static and dynamic hazards					
### Action of the course of th	MODULE I	V MICROPROCESSOR 8085 AND 8086				12 H	our
### ATTESTED  ### ATTESTED  ### Social Activation of an array in ascending and descending order - 8085.  ### Steper ments:  ### Design of synchronous and asynchronous counter.  ### ATTESTED  ### ATT	8085: Introde	ction - pin diagram - architecture - addressing modes	- instruction s	et - ass	embly	lang	uage
## 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 :							
### Superiments:    Comparison	8086: Pin dia	gram – architecture – addressing modes – instruction set –	assembly lang	uage pro	grann	ming.	
Experiments:  Digital:  1. Study of logic gates. 2. Design of adder and subtractor. 3. 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. 1. Basic arithmetic operations = 8085. 2. Sorting of an array in ascending and descending order = 8085. 3. Stepper motor interfacing = 8085. 4. Basic arithmetic operations = 8086. 5. Floating point operations = 8086. 12. Arithmetic operations = 8051.  FURTHER READING / CONTENT BEYOND SYLLABUS / SEMINAR:  VHDL programming for combinational and sequential circuits.  COURSE OUTCOMES: EMPLOY ARBITALY  After completion of the course, Student will be able to  CO1 Use different methods to simplify Boolean functions.  CO2 Demonstrate different types of combinational circuits using logic gates.  Implement various synchronous and asynchronous sequential circuits using logic gates and flip flops.  CO4 Summarize architecture, instructions and addressing modes of 8085, 8085 and 8051.	MODULE V	8051 MICROCONTROLLER AND TO INTERF	ACING			12 H	our
Experiments:  Digital:  1. Study of logic gates. 2. Design of adder and subtractor. 3. 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. 1. Basic arithmetic operations – 8085. 2. Sorting of an array in ascending and descending order – 8085. 3. Stepper motor interfacing – 8085. 4. Basic arithmetic operations – 8086. 5. Floating point operations – 8086. 6. PRINCIPAL. 6.G.S. Pillay Engineering College Thethi. Nagore - 6 to 1002.  Nagapattinam (Dt) Tarm. College Total (Dt) Tarm. College T	8051: Pin dia	gram – architecture – addressing modes – instruction set -	assembly lang	uage pro	eram	ming	N. C.
Digital:  1. Study of logic gates. 2. Design of adder and subtractor. 3. 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. 1. Basic arithmetic operations – 8085. 2. Sorting of an array in ascending and descending order – 8085. 3. Stepper motor interfacing – 8086. 4. Basic arithmetic operations – 8086. 5. Floating point operations – 8086. 12. Arithmetic operations – 8086. 12. Arithmetic operations – 8085. 12. Arithmetic operations – 8051.  TOTAL: 60 HOURS  FURTHER READING / CONTENT BEYOND SYLLABUS / SEMINAR:  VHDL programming for combinational and sequential circuits.  COURSE OUTCOMES: EMPLOY PRICLATY  After completion of the course, Student will be able to  CO1 Use different methods to simplify Boolean functions.  CO2 Demonstrate different types of combinational circuits using logic gates and flip flops.  CO3 Implement various synchronous and asynchronous sequential circuits using logic gates and flip flops.  CO4 Summarize architecture, instructions and addressing modes of 8085, 8085 and 8051.	I/O interfaci	ig: Serial and parallel interfacing – D/A and A/D convert	er.				
Digital:  1. Study of logic gates. 2. Design of adder and subtractor. 3. 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. 1. Basic arithmetic operations – 8085. 2. Sorting of an array in ascending and descending order – 8085. 3. Stepper motor interfacing – 8086. 4. Basic arithmetic operations – 8086. 5. Floating point operations – 8086. 12. Arithmetic operations – 8086. 12. Arithmetic operations – 8085. 12. Arithmetic operations – 8051.  TOTAL: 60 HOURS  FURTHER READING / CONTENT BEYOND SYLLABUS / SEMINAR:  VHDL programming for combinational and sequential circuits.  COURSE OUTCOMES: EMPLOY PRICLATY  After completion of the course, Student will be able to  CO1 Use different methods to simplify Boolean functions.  CO2 Demonstrate different types of combinational circuits using logic gates and flip flops.  CO3 Implement various synchronous and asynchronous sequential circuits using logic gates and flip flops.  CO4 Summarize architecture, instructions and addressing modes of 8085, 8085 and 8051.	The section of the se						
1. Study of logic gates. 2. Design of adder and subtractor. 3. 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. 1. Basic arithmetic operations – 8085. 2. Sorting of an array in ascending and descending order – 8085. 3. Stepper motor interfacing – 8085. 4. Basic arithmetic operations – 8086. 5. Floating point operations – 8086. 12. Arithmetic operations – 8086. 12. Arithmetic operations – 8051.  FURTHER READING / CONTENT BEYOND SYLLABUS / SEMINAR: VHDL programming for combinational and sequential circuits.  COURSE OUTCOMES: EMPLOYAGILITY  After completion of the course, Student will be able to  CO1 Use different methods to simplify Boolean functions.  CO2 Demonstrate different types of combinational circuits using logic gates.  CO3 Implement various synchronous and asynchronous sequential circuits using logic gates and flip flops.  CO4 Summarize architecture, instructions and addressing modes of 8085, 8085 and 8051.							
2. Design of adder and subtractor. 3. 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: 1. Basic arithmetic operations – 8085. 2. Sorting of an array in ascending and descending order – 8085. 3. Stepper motor interfacing – 8085. 4. Basic arithmetic operations – 8086. 5. Floating point operations – 8086. 12. Arithmetic operations – 8086. 12. Arithmetic operations – 8051.  FURTHER READING / CONTENT BEYOND SYLLABUS / SEMINAR:  VHDL programming for combinational and sequential circuits.  COURSE OUTCOMES:  EMPLOYAGILATY  After completion of the course, Student will be able to  CO1. Use different methods to simplify Boolean functions.  CO2. Demonstrate different types of combinational circuits using logic gates.  CO3. Implement various synchronous and asynchronous sequential circuits using logic gates and flip flops.  CO4. Summarize architecture, instructions and addressing modes of 8085, 8085 and 8051.		of logic gates					
3. 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. 1. Basic arithmetic operations – 8085. 2. Sorting of an array in ascending and descending order – 8085. 3. Stepper motor interfacing – 8085. 4. Basic arithmetic operations – 8086. 5. Floating point operations – 8086. 6. Floating point operations – 8086. 7. Arithmetic operations – 8051.  FURTHER READING / CONTENT BEYOND SYLLABUS / SEMINAR: VHDL programming for combinational and sequential circuits.  COURSE OUTCOMES: EMPLOYAGILATY After completion of the course, Student will be able to CO1 Use different methods to simplify Boolean functions. CO2 Demonstrate different types of combinational circuits using logic gates. CO3 Implement various synchronous and asynchronous sequential circuits using logic gates and flip flops. CO4 Summarize architecture, instructions and addressing modes of 8085, 8085 and 8051.							
4. Implementation of MUX and DEMUX. 5. Implementation of parity checker and generator. 6. Design of synchronous and asynchronous counter.  Microprocessor.  1. Basic arithmetic operations – 8085. 2. Sorting of an array in ascending and descending order – 8085. 3. Stepper motor interfacing – 8085. 4. Basic arithmetic operations – 8086. 5. Floating point operations – 8086. 12. Arithmetic operations – 8051.  FURTHER READING / CONTENT BEYOND SYLLABUS / SEMINAR:  VHDL programming for combinational and sequential circuits.  COURSE OUTCOMES:  EMPLOYAGILATY  After completion of the course, Student will be able to  CO1 Use different methods to simplify Boolean functions.  CO2 Demonstrate different types of combinational circuits using logic gates.  CO3 Implement various synchronous and asynchronous sequential circuits using logic gates and flip flops.  CO4 Summarize architecture, instructions and addressing modes of 8085, 8085 and 8051.							
5. Implementation of parity checker and generator. 6. Design of synchronous and asynchronous counter.  Microprocessor.  1. Basic arithmetic operations – 8085. 2. Sorting of an array in ascending and descending order – 8085. 3. Stepper motor interfacing – 8085. 4. Basic arithmetic operations – 8086. 5. Floating point operations – 8086. 12. Arithmetic operations – 8086. 12. Arithmetic operations – 8051.  FURTHER READING / CONTENT BEYOND SYLLABUS / SEMINAR:  VHDL programming for combinational and sequential circuits.  COURSE OUTCOMES: EMPLOYAGILATY  After completion of the course, Student will be able to  CO1 Use different methods to simplify Boolean functions.  CO2 Demonstrate different types of combinational circuits using logic gates.  CO3 Implement various synchronous and asynchronous sequential circuits using logic gates and flip flops.  CO4 Summarize architecture, instructions and addressing modes of 8085, 8085 and 8051.							
6. Design of synchronous and asynchronous counter.  Microprocessor:  1. Basic arithmetic operations – 8085.  2. Sorting of an array in ascending and descending order – 8085.  3. Stepper motor interfacing – 8085.  4. Basic arithmetic operations – 8086.  5. Floating point operations – 8086.  12. Arithmetic operations – 8051.  FURTHER READING / CONTENT BEYOND SYLLABUS / SEMINAR:  VHDL programming for combinational and sequential circuits.  COURSE OUTCOMES:  EMPLOYAGILATY  After completion of the course, Student will be able to  CO1 Use different methods to simplify Boolean functions.  CO2 Demonstrate different types of combinational circuits using logic gates.  CO3 Implement various synchronous and asynchronous sequential circuits using logic gates and flip flops.  CO4 Summarize architecture, instructions and addressing modes of 8085, 8085 and 8051.		mentation of narity checker and generator					
Microprocessor:  1. Basic arithmetic operations – 8085.  2. Sorting of an array in ascending and descending order – 8085.  3. Stepper motor interfacing – 8085.  4. Basic arithmetic operations – 8086.  5. Floating point operations – 8086.  12. Arithmetic operations – 8051.  FURTHER READING / CONTENT BEYOND SYLLABUS / SEMINAR:  VHDL programming for combinational and sequential circuits.  COURSE OUTCOMES: EMPLOYAGILATY  After completion of the course, Student will be able to  CO1 Use different methods to simplify Boolean functions.  CO2 Demonstrate different types of combinational circuits using logic gates.  CO3 Implement various synchronous and asynchronous sequential circuits using logic gates and flip flops.  CO4 Summarize architecture, instructions and addressing modes of 8085, 8085 and 8051.							
1. Basic arithmetic operations – 8085. 2. Sorting of an array in ascending and descending order – 8085. 3. Stepper motor interfacing – 8085. 4. Basic arithmetic operations – 8086. 5. Floating point operations – 8086. 12. Arithmetic operations – 8051.  FURTHER READING / CONTENT BEYOND SYLLABUS / SEMINAR:  VHDL programming for combinational and sequential circuits.  COURSE OUTCOMES:  EMPLOYAGILLTY  After completion of the course, Student will be able to  CO1 Use different methods to simplify Boolean functions.  CO2 Demonstrate different types of combinational circuits using logic gates.  CO3 Implement various synchronous and asynchronous sequential circuits using logic gates and flip flops.  CO4 Summarize architecture, instructions and addressing modes of 8085, 8085 and 8051.				ATT	EST	ED	1
2. Sorting of an array in ascending and descending order – 8085. 3. Stepper motor interfacing – 8085. 4. Basic arithmetic operations – 8086. 5. Floating point operations – 8086. 12. Arithmetic operations – 8051.  FURTHER READING / CONTENT BEYOND SYLLABUS / SEMINAR:  VHDL programming for combinational and sequential circuits.  COURSE OUTCOMES:  EMPLOYABILITY  After completion of the course, Student will be able to  CO1 Use different methods to simplify Boolean functions.  CO2 Demonstrate different types of combinational circuits using logic gates.  CO3 Implement various synchronous and asynchronous sequential circuits using logic gates and flip flops.  CO4 Summarize architecture, instructions and addressing modes of 8085, 8085 and 8051.				/	6	2	/
3. Stepper motor interfacing - 8085. 4. Basic arithmetic operations - 8086. 5. Floating point operations - 8086. 12. Arithmetic operations - 8051.  FURTHER READING / CONTENT BEYOND SYLLABUS / SEMINAR:  VHDL programming for combinational and sequential circuits.  COURSE OUTCOMES:  EMPLoy Prolitary  After completion of the course, Student will be able to  CO1 Use different methods to simplify Boolean functions.  CO2 Demonstrate different types of combinational circuits using logic gates.  CO3 Implement various synchronous and asynchronous sequential circuits using logic gates and flip flops.  CO4 Summarize architecture, instructions and addressing modes of 8085, 8085 and 8051.			Des	DANTA	201	1	
4. Basic arithmetic operations = 8086.  5. Floating point operations = 8086.  12. Arithmetic operations = 8051.  FURTHER READING / CONTENT BEYOND SYLLABUS / SEMINAR:  VHDL programming for combinational and sequential circuits.  COURSE OUTCOMES: EMPLOYABILITY  After completion of the course, Student will be able to  CO1 Use different methods to simplify Boolean functions.  CO2 Demonstrate different types of combinational circuits using logic gates.  CO3 Implement various synchronous and asynchronous sequential circuits using logic gates and flip flops.  CO4 Summarize architecture, instructions and addressing modes of 8085, 8085 and 8051.			DI. 3.	AIVIA	RAL	AN, M	E., F
5. Floating point operations — 8086.  12. Arithmetic operations — 8051.  Thethi. Nagore - 611 002  Nagapattinam (01) Tame (and TOTAL: 60 HOURS  FURTHER READING / CONTENT BEYOND SYLLABUS / SEMINAR:  VHDL programming for combinational and sequential circuits.  COURSE OUTCOMES: EMPLoy PROLLTY  After completion of the course, Student will be able to  CO1 Use different methods to simplify Boolean functions.  CO2 Demonstrate different types of combinational circuits using logic gates.  CO3 Implement various synchronous and asynchronous sequential circuits using logic gates and flip flops.  CO4 Summarize architecture, instructions and addressing modes of 8085, 8085 and 8051.			FGS				
12. Arithmetic operations — 8051. Nagapatinam (Dt) Tanio (Dt) Tani			T.0.5	hethi No	ngmee	ring U	ange
FURTHER READING / CONTENT BEYOND SYLLABUS / SEMINAR:  VHDL programming for combinational and sequential circuits.  COURSE OUTCOMES: EMPLOYABILATY  After completion of the course, Student will be able to  CO1 Use different methods to simplify Boolean functions.  CO2 Demonstrate different types of combinational circuits using logic gates.  CO3 Implement various synchronous and asynchronous sequential circuits using logic gates and flip flops.  CO4 Summarize architecture, instructions and addressing modes of 8085, 8085 and 8051.			Naa	inattings	gene -	DII (II)	17.
FURTHER READING / CONTENT BEYOND SYLLABUS / SEMINAR:  VHDL programming for combinational and sequential circuits.  COURSE OUTCOMES: EMPLOYABILATY  After completion of the course, Student will be able to  CO1 Use different methods to simplify Boolean functions.  CO2 Demonstrate different types of combinational circuits using logic gates.  CO3 Implement various synchronous and asynchronous sequential circuits using logic gates and flip flops.  CO4 Summarize architecture, instructions and addressing modes of 8085, 8085 and 8051.			TO	TAL:	6	0 HO	URS
VHDL programming for combinational and sequential circuits.  COURSE OUTCOMES: EMPLOYABILATY  After completion of the course, Student will be able to  CO1 Use different methods to simplify Boolean functions.  CO2 Demonstrate different types of combinational circuits using logic gates.  CO3 Implement various synchronous and asynchronous sequential circuits using logic gates and flip flops.  CO4 Summarize architecture, instructions and addressing modes of 8085, 8085 and 8051.	FURTHER 1	EADING/CONTENT BEYOND SYLLABUS/SEM				1122	- 10
After completion of the course, Student will be able to  CO1 Use different methods to simplify Boolean functions.  CO2 Demonstrate different types of combinational circuits using logic gates.  CO3 Implement various synchronous and asynchronous sequential circuits using logic gates and flip flops.  CO4 Summarize architecture, instructions and addressing modes of 8085, 8085 and 8051.					No.		
After completion of the course, Student will be able to  CO1 Use different methods to simplify Boolean functions.  CO2 Demonstrate different types of combinational circuits using logic gates.  CO3 Implement various synchronous and asynchronous sequential circuits using logic gates and flip flops.  CO4 Summarize architecture, instructions and addressing modes of 8085, 8085 and 8051.	COURSE O						
CO1 Use different methods to simplify Boolean functions. CO2 Demonstrate different types of combinational circuits using logic gates. CO3 Implement various synchronous and asynchronous sequential circuits using logic gates and flip flops. CO4 Summarize architecture, instructions and addressing modes of 8085, 8085 and 8051.							
CO2 Demonstrate different types of combinational circuits using logic gates.  CO3 Implement various synchronous and asynchronous sequential circuits using logic gates and flip flops.  CO4 Summarize architecture, instructions and addressing modes of 8085, 8085 and 8051.	(0)				5		
<ul> <li>CO3 Implement various synchronous and asynchronous sequential circuits using logic gates and flip flops.</li> <li>CO4 Summarize architecture, instructions and addressing modes of 8085, 8085 and 8051.</li> </ul>			ing logic gates				
flops.  CO4 Summarize architecture, instructions and addressing modes of 8085, 8085 and 8051.				ing logic	gates	and f	flin
CO4 Summarize architecture, instructions and addressing modes of 8085, 8085 and 8051.	5 4 4 4	CONTRACTOR OF THE PARTY OF THE		THE WEN	- Freeze	e market d	-
	COS						
	78.124	flops.	des of 8085 808	25 and 8	051		

1901MCX02	CONSTITUTION OF INDIA	L	T	P	C
		2	0	0	0
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.
	<ol> <li>To create consciousness in the students on democratic values and proconstitution.</li> </ol>	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
	<ol><li>To divulge the students about the statutory institutions.</li></ol>	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				

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

PRINCIPAL

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

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.	-		
	<ol><li>To make the student learn</li></ol>	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
<ol><li>Write a</li></ol>	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			

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

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

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

PRINCIPAL

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

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
What is Etique etiquette – Din Module V My family-Mys Travelling - Goir modern office- D	Learning by belf-Meeting pag abroad-Goi biscussing busing COMES:	Dressing eti Dressing eti y Practice people-Maku ing through ( ness.	quette . ng ContactsA city-Getting abo Customs-At a hotel-Shopping- Eati	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 - Gon modern office- D	Learning by elf-Meeting abroad-Goodes:  After complete Communication	Dressing eti y Practice people-Maku ing through ( ness. Skill etion of the o	quette .  ng ContactsA city-Getting about the contacts of the contact of the contact of the course, Student will be able to the course, Student will be able to the course of the cour	out town-Ong out- Mak	ur fi	lat-He	6 H ome ne ca	our life ll- A
What is Etique etiquette – Din Module V My family-Mys Travelling - Goir modern office- D  COURSE OUT	Learning by belf-Meeting pag abroad-Goiscussing busing COMES:  After complete Communication of the communication o	Dressing eti y Practice people-Maku ing through ( ness. Skill etion of the oute effectively ir interperson	quette .  ag ContactsA city-Getting about the contacts of city-Getting about the course, Student will be able to a in their business environment.  al skills which are mandatory in a	out town-Ong out- Mak	ur fi	lat-He	6 H ome ne ca	our life ll- /
What is Etique etiquette – Din Module V My family-Mys Travelling - Gou modern office- D  COURSE OUT  CO1 CO2	Learning by self-Meeting page abroad-Goodiscussing busing COMES:  After complete Communication of the Brand thems	Dressing eti y Practice people-Maku ing through ( ness. Skill etion of the oute effectively ir interperson	Quette .  ng ContactsA city-Getting about the course of	out town-Ong out- Mak	ur fi	lat-He	6 H ome ne ca	our life ll- A
What is Etique etiquette – Din Module V My family-Mys Travelling - Gou modern office- D  COURSE OUT  CO1  CO2  CO3	Learning by elf-Meeting pag abroad- Goo iscussing busing COMES: After complete Communication Improve the Brand them:	Dressing eticy Practice people-Makuing through (ness.  Skill etion of the oute effectively ir interperson selves to acquire to acquire the effectively in the effectively selves to acquire the effectively in the effectively selves to acquire the effectively in the effectively selves to acquire the effectively in the effectively in the effective the ef	quette .  ng ContactsA city-Getting about the course of	out town-Ong out- Mak	ur fi	lat-He	6 H ome ne ca	our life ll- /
What is Etique etiquette – Din Module V My family-Mys Travelling - Goir modern office- D  COURSE OUT  CO1  CO2  CO3  CO4  CO5	Learning by self-Meeting page abroad-Goodes:  After complete Communication in the Brand them:  Involve in the Survive in the Survive in the self-Meeting page 20 page	Dressing eticy Practice people-Makuing through (mess.  Skill etion of the ofte effectively interperson selves to acquire orporate etiques.	quette .  ng ContactsA city-Getting about the course of	out town-Ong out- Mak	ur fi	lat-He	6 H ome ne ca	our life ll- /
What is Etique etiquette – Din Module V My family-Mys Travelling - Gon modern office- D  COURSE OUT  CO2 CO3 CO4 CO5 REFERENCES	Learning by self-Meeting page abroad-Goodiscussing busing COMES:  After complete Communication of the Brand them: Involve in the Survive in the self-Meeting page 200.	Dressing eticy Practice people-Makuing through (ness.  Skill etion of the cate effectively in interperson selves to acquire the different selves to acquire etiques	quette .  ng ContactsA city-Getting about the course of	Tota	ur fi	lat-He	6 H ome ne ca	our life
What is Etique etiquette – Din Module V My family-Mys Travelling - Gon modern office- D  COURSE OUT  CO2 CO3 CO4 CO5 REFERENCES 1. Dr.k.Ale	Learning by the Learning busing the Learning busing the Learning busing the Learning busing the Learning business and the Learning business	Dressing eticy Practice people-Makuing through (ness.  Skill etion of the cate effectively in interperson selves to acquire the different selves the differ	Quette .  ng ContactsA city-Getting about the course of	Tota	ur fixing	lat-He	6 H ome ne ca 30 H	our life ll- /
What is Etique etiquette – Din Module V My family-Mys Travelling - Goir modern office- D  COURSE OUT  CO1  CO2  CO3  CO4  CO5  REFERENCES  1. Dr.k.Ale 2. Arunako	Learning by self-Meeting page abroad-Goodes:  After complete Communication Improve the Brand them: Involve in communication in the sex, "soft skills oneru, "Professions and the sex of the sex o	Dressing eticy Practice people-Makuing through (ness.  Skill petion of the cate effectively in interperson selves to acquire or porate etique different selves to acquire different selves to acquire different selves to acquire different selves to acquire etique different selves to acquire different selves to acquire acquire different selves to acquire different selves to acquire acquire different selves to acquire different selves to acquire acquire different selves to acquire different selves to acquire acquire different selves to acquire different selves to acquire acquire different selves to acquire different selves to acquire acquire different selves to acquire different selves dif	Quette .  ng ContactsA city-Getting about the course of	out town-Ong out- Mak Tota  corporate weed, 2009	ur fixing	lat-He	6 H ome ne ca 30 H	our life

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

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

1902CS401				SOFT	TWAF	RE E	NGIN	EER	ING			L	T	P	C
												3	0	0	3
										- 1		1			
PREREQUIS	ITES:	975	0				D.	2.000 N. A.	(A)	-			-		
COVERGE OR	T C T T T C		Compu	ner kn	lowled	ige,C.	Progra	amman	2						
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.
	To help t these basic					-			-			neer mg	and i	o app	iy
	THE RESIDENCE OF THE PARTY OF T		-	-			-		-		**	A	-6	-	
	<ol><li>To guide high quality</li></ol>														
	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	,
				- 11 - 52	1011							LOUDA	, IVI F	- FAIL	***

PRINCIPAL

E.G.S. Pillay Engineering Callage.
Thethi, Nagoro
Nagapattinam (U., recommended)

1902CS402		OPERATIN	G SYSTEMS	L	T	P	C
				3	0	0	3
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	<ul> <li>Allocation of frames</li> </ul>				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
Module IV File System: System Imple Storage Struc Module V Linux System up a LINUX Basic Concep	FILE SYSTEMS. File concept – Accementation: Director ture: Disk scheduling CASE STUDY Basic Concepts; Systultifunction Server, vts, Setting Up Xen, VI	AND I/O SYSTEMS s methods — Directory stru y implementation — Alloca — Disk management — Swap- stem Administration-Requir Domain Name System, Se Mware on Linux Host and A	cture – File system i tion methods – Free space management – ements for Linux Sy tting Up Local Netw	mounting - e-space ma RAID.	Protecting	9 H tion ent. N 9 H or, Se	our File fass our tting
Module IV File System: System Imple Storage Struc Module V Linux System up a LINUX Basic Concep	FILE SYSTEMS. File concept – Accementation: Director ture: Disk scheduling CASE STUDY Basic Concepts;Systultifunction Server, vts, Setting Up Xen,VX	AND I/O SYSTEMS s methods — Directory stru y implementation — Alloca Disk management — Swap- tem Administration—Requir Domain Name System, Se Mware on Linux Host and A	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
Module IV File System : System Imple Storage Struc Module V Linux System up a LINUX Basic Concep	FILE SYSTEMS A File concept - Accessmentation: Director ture: Disk scheduling CASE STUDY Basic Concepts; System of the Concept	AND I/O SYSTEMS s methods — Directory stru y implementation — Alloca — Disk management — Swap- tem Administration-Requir Domain Name System, Se Mware on Linux Host and A AR: it Function Server	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
Module IV File System : System Imple Storage Struc Module V Linux System up a LINUX Basic Concep	FILE SYSTEMS File concept - Accementation : Director ture: Disk scheduling   CASE STUDY   Basic Concepts; System of the Concep	AND I/O SYSTEMS s methods — Directory stru y implementation — Alloca — Disk management — Swap- stem Administration-Requir Domain Name System, Se Mware on Linux Host and A  AR: if Function Server and Tertiary Storage devices	cture – File system in tion methods – Free space management – ements for Linux Sy tting Up Local Netwoodding Guest OS.	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
Module IV File System: System Imple Storage Struc Module V Linux System up a LINUX Basic Concep	FILE SYSTEMS. File concept – Accementation: Director ture: Disk scheduling CASE STUDY Basic Concepts;Systematifunction Server, ots, Setting Up Xen,Vista,	AND I/O SYSTEMS s methods — Directory stru y implementation — Alloca — Disk management — Swap- stem Administration-Requir Domain Name System, Se Mware on Linux Host and A  AR: in Function Server and Tertiary Storage devices reading issues in Linux Systems	cture – File system in tion methods – Free space management – ements for Linux Sy tting Up Local Netwoodding Guest OS.	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
Module IV File System: System Imple Storage Struc Module V Linux System up a LINUX Basic Concep	FILE SYSTEMS. File concept – Accementation: Director ture: Disk scheduling CASE STUDY Basic Concepts; System of the Concepts;	AND I/O SYSTEMS s methods — Directory stru y implementation — Alloca — Disk management — Swap- tem Administration-Requir Domain Name System, Se Mware on Linux Host and A  AR: if Function Server and Tertiary Storage devices reading issues in Linux System  EMPLOYA BULLTY	cture – File system ration methods – Free-space management – ements for Linux Systing Up Local Network dding Guest OS.	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
Module IV File System: System Imple Storage Struc Module V Linux System up a LINUX Basic Concep	FILE SYSTEMS. File concept – Accementation: Director ture: Disk scheduling CASE STUDY Basic Concepts;System fultifunction Server, its, Setting Up Xen,VI READING / SEMIN Issues on Linux Multi Study about Stable a Learn about Multi thurcomes: After completion of	AND I/O SYSTEMS s methods — Directory stru y implementation — Alloca — Disk management — Swap- stem Administration-Requir Domain Name System, Se Mware on Linux Host and A  AR: in Function Server and Tertiary Storage devices reading issues in Linux System  Linux System  Course, Student will be a	cture — File system in tion methods — Free space management — ements for Linux Systing Up Local Netwood dding Guest OS.	mounting - e-space ma RAID. stem Adm ork Service Total:	Protect nagem inistrates; Virt	9 H tion. ent. M 9 H or, Se ualiza	our File fass our tting tion
Module IV File System: System Imple Storage Struc Module V Linux System up a LINUX Basic Concep	FILE SYSTEMS. File concept - Accementation: Director ture: Disk scheduling CASE STUDY Basic Concepts; System fultifunction Server, ets, Setting Up Xen, Vis. SEADING / SEMIN Issues on Linux Multi Study about Stable a Learn about Multi the UTCOMES: After completion of Understand Operation	AND I/O SYSTEMS s methods — Directory stru y implementation — Alloca — Disk management — Swap- stem Administration-Requir Domain Name System, Se Mware on Linux Host and A  AR: in Function Server and Tertiary Storage devices reading issues in Linux System  Linux System Structure, Operation g System Structure, Operation	cture — File system in tion methods — Free space management — ements for Linux Systing Up Local Netwood dding Guest OS.	mounting - e-space ma RAID. stem Adm ork Service Total:	Protect nagem inistrates; Virt	9 H tion. ent. M 9 H or, Se ualiza	our File flass our tting tion
Module IV File System: System Imple Storage Struc Module V Linux System IP a LINUX Basic Concep FURTHER I	FILE SYSTEMS. File concept – Accementation: Director ture: Disk scheduling    CASE STUDY     Basic Concepts; System of the concepts; System of the concepts of	AND I/O SYSTEMS s methods — Directory stru y implementation — Alloca — Disk management — Swap- tem Administration-Requir Domain Name System, Se Mware on Linux Host and A  AR: if Function Server and Tertiary Storage devices reading issues in Linux System the course, Student will be a g System Structure, Operati tionalities.	cture — File system intion methods — Free space management — ements for Linux Systing Up Local Network dding Guest OS.	mounting space ma RAID.  rstem Adm ork Service  Total:	Protect nagem inistrates; Virt	9 H ent. M 9 H or, Se ualiza	our File flass our tting tion
Module IV File System : System Imple Storage Struc Module V Linux System IP a LINUX Basic Concep FURTHER I  COURSE OF	FILE SYSTEMS. File concept – Accementation: Director ture: Disk scheduling CASE STUDY Basic Concepts;Systemultifunction Server, its, Setting Up Xen,VI READING / SEMIN Issues on Linux Multi Study about Stable a Learn about Multi the UTCOMES: After completion of Understand Operating concepts and its functions.	AND I/O SYSTEMS s methods — Directory stru y implementation — Alloca — Disk management — Swap- stem Administration-Requir Domain Name System, Se Mware on Linux Host and A  AR: in Function Server and Tertiary Storage devices reading issues in Linux System the course, Student will be a g System Structure, Operationalities. duling algorithms and dead	cture — File system into methods — Free space management — ements for Linux Systing Up Local Network dding Guest OS.	mounting space ma RAID.  rstem Adm ork Service  Total:	Protect nagem inistrates; Virt	9 H ent. M 9 H or, Se ualiza	our File flass our tting tion
Module IV File System: System Imple Storage Struc Module V Linux System up a LINUX Basic Concep FURTHER I  COURSE OF	FILE SYSTEMS. File concept - Accementation: Director ture: Disk scheduling CASE STUDY Basic Concepts; System fultifunction Server, its, Setting Up Xen, Vis. Setting Up Xen, Vis. READING / SEMIN Issues on Linux Multistudy about Stable a Learn about Multithe UTCOMES: After completion of Understand Operating concepts and its functions of the Compare and contrasting to the Compare and contrasting the Contra	AND I/O SYSTEMS s methods — Directory stru y implementation — Alloca — Disk management — Swap- stem Administration-Requir Domain Name System, Se fware on Linux Host and A  AR: in Function Server and Tertiary Storage devices reading issues in Linux System the Coya Blanty the course, Student will be a g System Structure, Operati tionalities. duling algorithms and dead t various memory management	cture — File system into methods — Free space management — ements for Linux Systing Up Local Network dding Guest OS.  Tems  The properties of the system in	mounting space ma RAID.  rstem Adm ork Service  Total:	Protect nagem inistrates; Virt	9 H ent. M 9 H or, Se ualiza	our File fass our tting
Module IV File System: System Imple Storage Struc Module V Linux System up a LINUX Basic Concep FURTHER I  COURSE OF	FILE SYSTEMS. File concept - Accementation: Director ture: Disk scheduling CASE STUDY Basic Concepts; System fultifunction Server, its, Setting Up Xen, Vis. Setting Up Xen, Vis. READING / SEMIN Issues on Linux Multistudy about Stable a Learn about Multithe UTCOMES: After completion of Understand Operating concepts and its functions of the Compare and contrasting to the Compare and contrasting the Contra	AND I/O SYSTEMS s methods — Directory stru y implementation — Alloca — Disk management — Swap- stem Administration-Requir Domain Name System, Se Mware on Linux Host and A  AR: in Function Server and Tertiary Storage devices reading issues in Linux System the course, Student will be a g System Structure, Operationalities. duling algorithms and dead	cture — File system into methods — Free space management — ements for Linux Systing Up Local Network dding Guest OS.  Tems  The properties of the system in	mounting space ma RAID.  rstem Adm ork Service  Total:	Protect nagem inistrates; Virt	9 H ent. M 9 H or, Se ualiza	our File flass our tting tion
Module IV File System: System Imple Storage Struc Module V Linux System up a LINUX Basic Concep FURTHER I  COURSE OF	FILE SYSTEMS. File concept - Accessmentation: Director ture: Disk scheduling CASE STUDY Basic Concepts;System Server, and the server, and the server, and the server, and the server of	AND I/O SYSTEMS s methods — Directory stru y implementation — Alloca — Disk management — Swap- stem Administration-Requir Domain Name System, Se fware on Linux Host and A  AR: in Function Server and Tertiary Storage devices reading issues in Linux System the Coya Blanty the course, Student will be a g System Structure, Operati tionalities. duling algorithms and dead t various memory management	cture — File system into methods — Free space management — ements for Linux Systing Up Local Network dding Guest OS.  Tems  The properties of the system in	mounting space ma RAID.  rstem Adm ork Service  Total:	Protect nagem inistrates; Virt	9 H ent. M 9 H or, Se ualiza	our File flass our tting tion
Module IV File System : System Imple Storage Struc Module V Linux System up a LINUX Basic Concep  FURTHER I  COURSE OF  CO1  CO2  CO3  CO4  CO5  REFERENC	FILE SYSTEMS. File concept - Accessmentation: Director ture: Disk scheduling CASE STUDY Basic Concepts; System fultifunction Server, its, Setting Up Xen, Vis. Setting Up Xen, Vis. READING / SEMIN Issues on Linux Multi Study about Stable a Learn about Multi the UTCOMES: After completion of Understand Operating concepts and its function of Understand Contract Analyze the File systems. Perform administration ES:	AND I/O SYSTEMS s methods — Directory stru y implementation — Alloca — Disk management — Swap- stem Administration-Requir Domain Name System, Se fware on Linux Host and A  AR: in Function Server and Tertiary Storage devices reading issues in Linux System the Course, Student will be a g System Structure, Operati tionalities. duling algorithms and dead at various memory managem ems and disk scheduling managements and disk scheduling managements and disk scheduling managements.	cture — File system into methods — Free space management — ements for Linux Systing Up Local Network dding Guest OS.  tems  ble to one and Services& Illock, prevention and ment schemes.	mounting - e-space ma RAID.  stem Adm ork Service  Total:	Protect nagemainistrates; Virt	9 H tion. ent. M 9 H or, Se ualiza 45 H ing sy	our File fass our tting tion
Module IV File System : System Imple Storage Struc Module V Linux System IP & LINUX Basic Concep FURTHER I  COURSE OF  CO1  CO2  CO3  CO4  CO5  REFERENC	FILE SYSTEMS. File concept – Accementation: Director ture: Disk scheduling    CASE STUDY     Basic Concepts; System fultifunction Server, ots, Setting Up Xen, Vista, Setting Up Xen, V	AND I/O SYSTEMS s methods — Directory stru y implementation — Alloca — Disk management — Swap- stem Administration-Requir Domain Name System, Se fware on Linux Host and A  AR: in Function Server and Tertiary Storage devices reading issues in Linux System the Course, Student will be a g System Structure, Operati tionalities. duling algorithms and dead at various memory managem ems and disk scheduling managements and disk scheduling managements and disk scheduling managements.	cture — File system into methods — Free space management — ements for Linux Systing Up Local Network dding Guest OS.  tems  ble to one and Services& Illock, prevention and ment schemes.	mounting - e-space ma RAID.  stem Adm ork Service  Total:	Protect nagemainistrates; Virt	9 H tion. ent. M 9 H or, Se ualiza 45 H ing sy	our File fass our tting tion
Module IV File System: System Imple Storage Struc Module V Limux System up a LINUX Basic Concep FURTHER I  COURSE OF CO1 CO2 CO3 CO4 CO5 REFERENC 1. Abraham S	FILE SYSTEMS. File concept – Accementation: Director ture: Disk scheduling    CASE STUDY     Basic Concepts; System of the concepts; System of the concepts; System of the concepts of the concepts and its function of the concepts and its function of the concepts and its function of the concepts and contract of the compare and contract of the compare and contract of the concepts and its function of the concepts and contract of the concepts of th	AND I/O SYSTEMS s methods — Directory struction implementation — Allocated Disk management — Swaptem Administration-Required Domain Name System, Selfware on Linux Host and Allocated Tertiary Storage devices reading issues in Linux System Coya Bully he course, Student will be a great System Structure, Operationalities.  In June 1997 A Bully he course, Student will be a great system Structure, Operationalities.  In June 1997 A Bully he course and disk scheduling managements a	cture — File system into methods — Free space management — ements for Linux Systing Up Local Network dding Guest OS.  tems  ble to one and Services& Illock, prevention and ment schemes.	respace man RAID.  Stem Admork Services  Total:  ATTES	Protect nagemainistrates; Virt	9 H tion. ent. M 9 H or, Se ualiza 45 H ing sy	our File fass our tting tion
Module IV File System: System Imple Storage Struc Module V Linux System IP a LINUX Basic Concep FURTHER I  COURSE OF CO1 CO2 CO3 CO4 CO5 REFERENC I. Abraham S Edition, John	FILE SYSTEMS. File concept - Accessmentation: Director ture: Disk scheduling CASE STUDY Basic Concepts;Systemultifunction Server, its, Setting Up Xen,VI READING / SEMIN Issues on Linux Multi Study about Stable a Learn about Multi the UTCOMES: After completion of Understand Operating concepts and its function of Understand Operating Concepts and its function of Understand Contract Analyze the File systems of Perform administration of Server, its perform administration of Understand Contract Analyze the File systems of Compare and Contract Analyze the File systems of Compare and Contract Analyze the File systems of Contract Analyze th	AND I/O SYSTEMS s methods — Directory struction implementation — Allocate — Disk management — Swaptem Administration-Required Domain Name System, Selfware on Linux Host and Allocate — The Corps of Tertiary Storage devices reading issues in Linux System Corps of Student will be a great System Structure, Operationalities.  In the course, Student will be a great system Structure, Operationalities.  In the course in Linux Servers and disk scheduling managements and disk scheduling managements.	cture — File system into methods — Free space management — ements for Linux Systing Up Local Network dding Guest OS.  Tems  Tems  Tems  Tems  Took, prevention and tent schemes.  Techanism.	respace man RAID.  Stem Admork Services  Total:  Total:  ATTES  PRINC	Protect nagemainistrates; Virt	9 H tion. ent. M 9 H or, Se ualiza 45 H ing sy ims.	our File fass our tting tion
Module IV File System : System Imple Storage Struc Module V Linux System IP a LINUX Basic Concep FURTHER I  COURSE OF CO1 CO2 CO3 CO4 CO5 REFERENCE I. Abraham S Edition, John	FILE SYSTEMS. File concept - Accessmentation: Director ture: Disk scheduling CASE STUDY Basic Concepts; Systematification Server, ots, Setting Up Xen, Vis. Setting Up Xen, Vis. READING / SEMIN Issues on Linux Multi Study about Stable a Learn about Multi the UTCOMES: After completion of Understand Operating concepts and its function Design various Sche Compare and contrate Analyze the File systematic Perform administration ES: Silberschatz, Peter Base Wiley and Sons Inc., Tanenbaum, "Modern	AND I/O SYSTEMS s methods — Directory struction implementation — Allocated Disk management — Swaptem Administration-Required Domain Name System, Selfware on Linux Host and Allocated Tertiary Storage devices reading issues in Linux System Coya Bully he course, Student will be a great System Structure, Operationalities.  In June 1997 A Bully he course, Student will be a great system Structure, Operationalities.  In June 1997 A Bully he course and disk scheduling managements a	cture — File system into methods — Free space management — ements for Linux Systing Up Local Network dding Guest OS.  tems  ble to one and Services& Illust schemes.  echanism.  Operating SysDep SC 4	respace man RAID.  Stem Admork Services  Total:  Total:  ATTES  PRINC	Protest nagemainistrates; Virt	9 H rtion. ent. M 9 H or, Se ualiza 45 H ing sy ims.	our File fass our ttin tion

1902CS403			COMPUTER NE	TWORKS		L.	T	P	C
		-				3	0	0	3
PPEPEOIII	STEEC.			A SAME AND					
PREREQUIS	MIES.	-	1.Basic Computer knowledge						
			Computer Organization and						
COURSE OF	DECTRES.		2. Computer Organization and	Architecture				1	
		_	e-of-the-art in network protoco	1	3 10				
20	ain knowleds	es shr	out the functions of different n	us, arcunecture	s and appu	canc	ms.		
			rious aspects of computer net						
2.4	DISTRIBUTE OF L	me va	arous aspects or computer ner	VOIES.	V-11	_			
MODULEI	INTRO	ODUC	CTION				1 9	)	_
Data Commu	The state of the s		k Criteria - Components of Ne	tworks -Types	of Connect	ion	100		n 0
Data Flow - 1	Vetwork Topo	ologie	s- Protocols and standards-	Categories of )	Vetworks -	Men	work	Mod	iels
The OSI Mod	el - TCP/IP Pr	Totoco	ol Suite - Addressing - Networ	king Devices.	The state of the s		n orn	. Industry	PELLS
MODULE II			AND DATA LINK LAYER	NAME OF TAXABLE PARTY.			1	10	I P
Physical Lau	er- Types of	f erri	ors-Media Access Control:	CSMA CSM	A/CD CS	MA	Carrier 1977	C 75.0	met
Wireless LAN	- Bluetooth	Flov	w Control-Error Control - Err	or Detection T	echniques-	HD	LC s	and o	the
Dais Lille Pio	LOCOIS	A PROPERTY OF			1			-	
MODULE II	NETW	ORK	LAYER				9	)	7
Internetworkir	ig - IPv4 - IPv	v6 −1	Network Layer: Delivery, Forv	arding and Ro	uting-Rout	ing			- II
Protocols: AR	P and RARP,	BOO	TP, ICMP, DHCP						-
MODULE IV	TRANS	SPOF	RT LAYER			_	0	)	
Overview of	Transport I	layer,	Reliable/Unreliable Transr	nission. TCP.	UDP '	ГСР	Co	nnec	tion
Management -	Flow Control	N-Co	ongestion Control, Congestion	Avoidance and	Ouality of	Ser	vice	(On!	5)
MODULE V	THE RESERVE THE PERSON NAMED IN COLUMN 2 IS NOT THE OWNER.		ION LAYER				8	-	8-
Domain Name	System (D)	NS)	Domain Name Snace - DNS	in the Interne	t - HTTP	-16	mail	· 53.6	TD
mone and	P - File Trans	sfer P	rotocol -SNMP-Web Services			L	RESIDENCE DO	- Wate	
POP3and IMA		PER		and a	Total:		4	15 Ho	ur
AND THE RESERVE	CONTRACTOR AND ADDRESS.	137					21		
AND THE RESERVE	EADING:							7	
AND THE RESERVE		imple	Socket Shell - Security Service	es - Firewalls.			17		
FURTHER R	SSH: Si	imple	Socket Shell - Security Service						
FURTHER R	SSH: Si		Socket Shell - Security Service  EMPLOYABILITY / ENT.  of the course, Student will be	REPRENEURS					
FURTHER R COURSE OU	SSH: Size	letion	EMPLOYABILITY/ENT	REPRENEURS?					
FURTHER R	SSH: Si TCOMES: After compl Describe the Apply the fu	eletion le basi functio	EMPLOYABILITY / ENT of the course, Student will be cs of computer networks and p ons of different layers and in d	REPRENEURS) able to protocols pth knowledge	n p e of data lin	k la	yer		
COURSE OU  CO1  CO2  CO3	SSH: Si TCOMES: After compl Describe the Apply the fu Analyze the	eletion le basi unction diffe	EMPLOYABILITY / ENT of the course, Student will be cs of computer networks and p ons of different layers and in d crent protocols and network lay	REPREMEURS able to rotocols epth knowledge er components	ηρ e of data lin	- 44	yer		
COURSE OU CO1 CO2 CO3 CO4	SSH: Si TCOMES: After compl Describe the Apply the fu Analyze the Identify the	eletion le basi function e diffe basic	EMPLOYABILITY / ENT. of the course, Student will be cs of computer networks and p cus of different layers and in d crent protocols and network lay functions of transport layer as	REPREMEURS able to rotocols epth knowledge er components	ηρ e of data lin	- 44	yer		
COURSE OU CO1 CO2 CO3 CO4 CO5	SSH: Si TCOMES: After compl Describe the Apply the fu Analyze the Identify the Explain the	eletion le basi function e diffe basic	EMPLOYABILITY / ENT of the course, Student will be cs of computer networks and p ons of different layers and in d crent protocols and network lay	REPREMEURS able to rotocols epth knowledge er components	ηρ e of data lin	- 44	yer		
COURSE OU CO1 CO2 CO3 CO4 CO5 REFERENCE	SSH: Sin TCOMES: After completion Describe the Apply the for Analyze the Identify the Explain the EX	e basic function diffe basic work	EMPLOYABILITY / ENT. of the course, Student will be cs of computer networks and p ous of different layers and in d erent protocols and network lay functions of transport layer ar ing of application layer	REPRENEURS able to rotocols epth knowledge er components ad congestion in	ηρ e of data lin n networks.				
COURSE OU CO1 CO2 CO3 CO4 CO5 REFERENCE	SSH: Size TCOMES: After complete the Apply the further Analyze the Identify the Explain th	e basi function diffe basic work	EMPLOYABILITY / ENT. of the course, Student will be cs of computer networks and p ons of different layers and in d ent protocols and network lay functions of transport layer ar ing of application layer munication and Networking.	REPRENEURS) able to protocols epth knowledge er components ad congestion in	e of data lin	Hill	. 201	13	
COURSE OU  CO1  CO2  CO3  CO4  CO5  REFERENCE 1. Behrouz A. Fo	SSH: Sin TCOMES: After complete Describe the Apply the for Analyze the Identify the Explain the Explain the constraint on the serious and Keith	e basi unction diffe basic work Com	EMPLOYABILITY / ENT. of the course, Student will be cs of computer networks and p ous of different layers and in d rent protocols and network lay functions of transport layer ar ing of application layer munication and Networking, 2 oss, Computer Networking; A	REPRENEURS) able to protocols epth knowledge er components ad congestion in	e of data lin	Hill	. 201	13 e	
COURSE OU CO1 CO2 CO3 CO4 CO5 REFERENCE 1.BehrouzA Fo 2.James F.Kur	SSH: Since TCOMES:  After complete the Apply the further Analyze the Identify the Explain	e basic function de diffe e basic work a Com a W.R.	EMPLOYABILITY / ENT. of the course, Student will be cs of computer networks and p cas of different layers and in d crent protocols and network lay functions of transport layer ar ing of application layer munication and Networking, f oss, Computer Networking: A	REPRENEURS able to rotocols epth knowledge er components ad congestion in th Edition, Tat Top-Down Ap	e of data lin	Hill	. 201	13 e	
COURSE OU  CO1  CO2  CO3  CO4  CO5  REFERENCE 1. Behrouz A. Fo 2. James F. Kur Internet, Pears 3. Larry L. Pete	SSH: Since TCOMES:  After complete the Apply the further Analyze the Identify the Explain	e basic e diffe work work Com a Com a W.R. , 2017	EMPLOYABILITY / ENT. of the course, Student will be cs of computer networks and p as of different layers and in d rent protocols and network lay functions of transport layer ar ing of application layer munication and Networking.  oss, Computer Networking: A  varie, Computer Networks, Ele	REPRENEURS able to rotocols epth knowledge er components ad congestion in th Edition, Tat Top-Down Ap	e of data lin on networks. a McGraw- proach Fea	Hilli	. 201	e	2
COURSE OU CO1 CO2 CO3 CO4 CO5 REFERENCE 1.BehrouzA Fo 2.James F.Kur Internet, Pears 3.Larry L.Pete 4.Andrew S.Ta	SSH: Sin TCOMES: After complete the Apply the furified Analyze the Identify the Explain th	e basic e diffe basic work Com a Com a W.R. , 2017 ce S.D	EMPLOYABILITY / ENT. of the course, Student will be cs of computer networks and p cus of different layers and in d crent protocols and network lay functions of transport layer ar ing of application layer munication and Networking, s coss, Computer Networking: A cavie, Computer Networks, Ele cer Networks, Pearson Education	REPRENEURS able to rotocols epth knowledge er components ad congestion in th Edition, Tat Top-Down Ap evier, 2009 on, 2010	of data ling of da	Hilliturio	, 201 ag th	ED	2
COURSE OU  CO1  CO2  CO3  CO4  CO5  REFERENCE 1. Behrouz A. Fo 2. James F. Kur Internet, Pears 3. Larry L. Pete 4. Andrew S. Ta 5. William Stal	SSH: Sin TCOMES:  After complete the Apply the further Analyze the Identify the Explain th	e basic function e diffe e basic work a Com a W.R. , 2017 ce S.D. compute	EMPLOYABILITY / ENT. of the course, Student will be cs of computer networks and p as of different layers and in d rent protocols and network lay functions of transport layer ar ing of application layer munication and Networking.  oss, Computer Networking: A  varie, Computer Networks, Ele	REPRENEURS able to rotocols epth knowledge er components ad congestion in th Edition, Tat Top-Down Ap evier, 2009 on, 2010	e of data lin	Hill	, 201	ED AN, N	2 .E
COURSE OU CO1 CO2 CO3 CO4 CO5 REFERENCE 1.BehrouzA Fo 2.James F.Kur Internet, Pears 3.Larry L.Pete 4.Andrew S.Ta	SSH: Sin TCOMES: After completion Describe the Apply the fur Analyze the Identify the Explain the Explain the Orouzan, Data ose and Keith on Education, rson and Bruck menbaum, Collings, Data and e weebly.com	e basic iunction e diffe basic work a Com a W.R. , 2017 ce S.D. compute and Com	EMPLOYABILITY / ENT. of the course, Student will be cs of computer networks and p cus of different layers and in d cent protocols and network lay functions of transport layer ar ing of application layer munication and Networking, f coss, Computer Networking: A coss, Computer Networks, El- cer Networks, Pearson Education inputer Communication, Pears	REPRENEURS able to rotocols epth knowledge er components ad congestion in th Edition, Tat Top-Down Ap evier, 2009 on, 2010	e of data lin	Hill	, 201	ED AN, N	

1902CS404		DESIGN & ANALYSIS OF ALGORITHMS		T.	P	C
			3	0	0	3
DDEDECT	CEEEC					
PREREQUI	1.Data Stru	atura a				
COURSE O						
COURSE						
		algorithm analysis techniques.				
	2. Become	familiar with the different algorithm design techniques.  nd the limitations of Algorithm power				
-	J. CHRISTIA	nd the initiations of Algorithm power				
Module I	INTROD	UCTION		T	9 H	STREET
		- Fundamentals of Algorithmic Problem Solving -	Important F	roblem	Tun	oc -
Fundamental	s of the Anal	ysis or Algorium Emclency – Anarysis Framework – Analysis for Recursive and Non-recursive algorithms.	Asymptotic	Notatio	ns an	d its
		-AND-CONOUER			9 H	NIII.
		odology - Merge sort - Quick sort - Binary search - Stra	ssen's Matri	X	7 11	PERT :
		Problem-Finding Max & Min				
Module III		IIC PROGRAMMING			9 H	our:
Dynamic pro Problem and	gramming -v Memory fun	varsnan s and Floyd algorithm – Optimal Binary Search ctions-Travelling Salesman Problem.	h Trees – 0/	1 Knaps		
Module IV					9 H	71117
Racktracking	-n Oneene		The state of the s	8 9		runa.
AND REAL PROPERTY AND ADDRESS.	II-CIRCEII9	problem – Graph Coloring Problem-Hamiltonian Circuit	t Problem -	Subset	Sum	
	, II-Queens	problem – Graph Coloring Problem-Hamiltonian Circuit	t Problem –	Subset	Sum	
Problem Module V	BRANCI	H AND BOUND			9 He	our
Problem Module V Branch and B	BRANCI Bound – Assi					our
Problem Module V Branch and B Approximation	BRANCI Bound – Assi on Algorithm	H AND BOUND  gnment problem – Knapsack Problem – Traveling Saless s for NP – Hard Problems.		n-		
Problem Module V Branch and B Approximation	BRANCI Bound – Assign on Algorithm	H AND BOUND  gnment problem – Knapsack Problem – Traveling Saless s for NP – Hard Problems.  CONTENT BEYOND SYLLABUS / SEMINAR:	man Probler	n- 45	9 Ho	JRS
Problem Module V Branch and B Approximation	BRANCI Bound – Assi on Algorithm READING Iterative Me Flow proble	H AND BOUND  gnment problem – Knapsack Problem – Traveling Saless s for NP – Hard Problems.  CONTENT BEYOND SYLLABUS / SEMINAR: ethods – Simplex Linear Problem, Stable Marriage Problem	man Probler	n- 45	9 Ho	JRS
Problem Module V Branch and B Approximation	BRANCI Bound – Assign on Algorithm READING Iterative Me Flow proble	H AND BOUND  gument problem – Knapsack Problem – Traveling Saless s for NP – Hard Problems.  CONTENT BEYOND SYLLABUS / SEMINAR: ethods – Simplex Linear Problem, Stable Marriage Problem  EMPLOYABILITY	man Probler	n- 45	9 Ho	JRS
Problem Module V Branch and B Approximation FURTHER I	BRANCI Bound – Assi on Algorithm READING Iterative Me Flow proble UTCOMES After comp	H AND BOUND  gnment problem – Knapsack Problem – Traveling Saless s for NP – Hard Problems.  CONTENT BEYOND SYLLABUS / SEMINAR: ethods – Simplex Linear Problem, Stable Marriage Problem  EMPLOYABILITY  letion of the course, Student will be able to	man Probler	n- 45	9 Ho	JRS
Problem Module V Branch and B Approximation FURTHER I	BRANCI Bound – Assi on Algorithm READING Iterative Me Flow proble UTCOMES After comp	HAND BOUND  Enment problem - Knapsack Problem - Traveling Saless s for NP - Hard Problems.  CONTENT BEYOND SYLLABUS / SEMINAR:  Thousand Problem, Stable Marriage Problem  EMPONARIATY  Letion of the course, Student will be able to time and space complexity of algorithms	man Probler	n- 45	9 Ho	JRS
Problem Module V Branch and B Approximation FURTHER I COURSE OF COLUMN CO2	BRANCI Bound – Assign Algorithm READING Iterative Me Flow proble UTCOMES After comp Analyze the Design algo	HAND BOUND  gument problem – Knapsack Problem – Traveling Saless s for NP – Hard Problems.  CONTENT BEYOND SYLLABUS / SEMINAR: ethods – Simplex Linear Problem, Stable Marriage Problem  EMPONARY  letion of the course, Student will be able to etime and space complexity of algorithms withms for various computing problems	man Probler TOTAL:	n- 45 te Probl	9 Ho	JRS
Problem Module V Branch and B Approximation FURTHER I  COURSE OF CO1 CO2 CO3	BRANCI Bound – Assign Algorithm READING Iterative Me Flow proble UTCOMES After comp Analyze the Design algo Critically as	AND BOUND  gnment problem – Knapsack Problem – Traveling Saless s for NP – Hard Problems.  CONTENT BEYOND SYLLABUS / SEMINAR: ethods – Simplex Linear Problem, Stable Marriage Problem  EMPLOYARACTY  letion of the course, Student will be able to etime and space complexity of algorithms withins for various computing problems halyze the different algorithm design techniques for a given	man Probler TOTAL:	n- 45 te Probl	9 Ho	JRS
Problem Module V Branch and B Approximation FURTHER I  COURSE OF CO1 CO2 CO3 CO4	BRANCI Bound – Assign Algorithm READING Iterative Me Flow proble UTCOMES After comp Analyze the Design algo Critically an Modify exist	AND BOUND  Enment problem – Knapsack Problem – Traveling Saless s for NP – Hard Problems.  CONTENT BEYOND SYLLABUS / SEMINAR:  Thousand Problem, Stable Marriage Problem  ENPOYABILITY  Letion of the course, Student will be able to time and space complexity of algorithms  withins for various computing problems  halyze the different algorithm design techniques for a givening algorithms to improve efficiency.	man Probler TOTAL:	n- 45 te Probl	9 Ho	JR.
Problem Module V Branch and B Approximation FURTHER I  COURSE O  CO1 CO2 CO3 CO4 CO5	BRANCI Bound – Assistant Algorithm  READING Iterative Me Flow proble UTCOMES After comp Analyze the Design algo Critically an Modify exist	AND BOUND  gnment problem – Knapsack Problem – Traveling Saless s for NP – Hard Problems.  CONTENT BEYOND SYLLABUS / SEMINAR: ethods – Simplex Linear Problem, Stable Marriage Problem  EMPLOYARACTY  letion of the course, Student will be able to etime and space complexity of algorithms withins for various computing problems halyze the different algorithm design techniques for a given	man Probler TOTAL:	n- 45 te Probl	9 Ho	JRS
Problem Module V Branch and E Approximation FURTHER I  COURSE O  CO1 CO2 CO3 CO4 CO5 REFERENC	BRANCI Bound – Assistant Algorithm READING Iterative Me Flow proble UTCOMES After comp Analyze the Design algo Critically at Modify exis Identify the	AND BOUND  In ment problem – Knapsack Problem – Traveling Saless  Is for NP – Hard Problems.  CONTENT BEYOND SYLLABUS / SEMINAR:  Ethods – Simplex Linear Problem, Stable Marriage Problem  ENPOYARMONT  letion of the course, Student will be able to  time and space complexity of algorithms  orithms for various computing problems  halyze the different algorithm design techniques for a given sting algorithms to improve efficiency.  limitations of algorithms in problem solving.	man Probler TOTAL:	n- 45 te Probl	9 Ho HOU em, N	JRS
Problem Module V Branch and B Approximation FURTHER I  COURSE O  CO1 CO2 CO3 CO4 CO5 REFERENC 1. Thor Algo	BRANCI Bound – Assistant Algorithm READING Iterative Me Flow proble UTCOMES After comp Analyze the Design algo Critically an Modify exis Identify the ES: nas H.Corm orithms", This	AND BOUND  In ment problem — Knapsack Problem — Traveling Saless for NP — Hard Problems.  CONTENT BEYOND SYLLABUS / SEMINAR:  Thousand Reproblem, Stable Marriage Problem  EMPLOYARSICATY  Letion of the course, Student will be able to time and space complexity of algorithms withins for various computing problems halyze the different algorithm design techniques for a given sting algorithms to improve efficiency.  Limitations of algorithms in problem solving.  The course of the	TOTAL:  lem, Biparti  ven problem	n- 45 te Probl	9 Ho 6 HOU em, N	JRS Max
Problem Module V Branch and E Approximation FURTHER I  COURSE OF CO2 CO3 CO4 CO5 REFERENCE 1. Thore Algoe 2. Alfine	BRANCI Bound – Assign Algorithm READING Iterative Me Flow proble UTCOMES: After comp Analyze the Design algo Critically an Modify exist Identify the ES: nas H.Corm withms", Thin ed V. Aho, J. cation, Reprin	AND BOUND enment problem – Knapsack Problem – Traveling Salests for NP – Hard Problems.  CONTENT BEYOND SYLLABUS / SEMINAR: ethods – Simplex Linear Problem, Stable Marriage Problem  ENPOYABILITY letion of the course, Student will be able to etime and space complexity of algorithms withins for various computing problems halyze the different algorithm design techniques for a given sting algorithms to improve efficiency. limitations of algorithms in problem solving.  en, Charles E.Leiserson, Ronald L. Rivest and Clift and Edition, PHI Learning Private Limited, 2012. ohn E. Hopcroft and Jeffrey D. Ullman, "Data Structurent 2006.	TOTAL:  lem, Biparti  ven problem  ford Stein,  es and Algo	"Introd	9 Hotem, Note that the search of the search	JR.
Problem Module V Branch and B Approximation FURTHER I  COURSE OF CO2 CO3 CO4 CO5 REFERENCE 1. Thore Algoes 2. Alfred Educe 3. Dona	BRANCI Bound – Assistant Algorithm READING Iterative Me Flow proble UTCOMES: After comp Analyze the Design algo Critically an Modify exis Identify the ES: nas H.Corm orithms", This ed V. Aho, J. cation, Reprinal d E. Knuth,	AND BOUND enment problem — Knapsack Problem — Traveling Saless for NP — Hard Problems.  CONTENT BEYOND SYLLABUS / SEMINAR: ethods — Simplex Linear Problem, Stable Marriage Problem  ENPOYARSICATY letion of the course, Student will be able to etime and space complexity of algorithms withms for various computing problems halyze the different algorithm design techniques for a given sting algorithms to improve efficiency. limitations of algorithms in problem solving.  en, Charles E Leiserson, Ronald L. Rivest and Clift of Edition, PHI Learning Private Limited, 2012. ohn E. Hopcroft and Jeffrey D. Ullman, "Data Structurated 2006. "The Art of Computer Programming", Volumes 1& 3 P.  "The Art of Computer Programming", Volumes 1& 3 P.	TOTAL:  lem, Biparti  ven problem  ford Stein,  es and Algo	"Introd	9 Hotem, Note that the search of the search	JRS Max
Problem Module V Branch and E Approximation FURTHER I  COURSE OF CO2 CO3 CO4 CO5 REFERENC 1. Thore Algo 2. Alfred Educe 3. Dona 4. Steve	BRANCI Bound – Assistant Algorithm READING Iterative Me Flow proble UTCOMES After comp Analyze the Design algo Critically at Modify exis Identify the ES: mas H.Corm withms", This ed V. Aho, J. cation, Reprinal ald E. Knuth, en S. Skiena,	AND BOUND enment problem – Knapsack Problem – Traveling Salests for NP – Hard Problems.  CONTENT BEYOND SYLLABUS / SEMINAR: ethods – Simplex Linear Problem, Stable Marriage Problem  ENPOYABILITY letion of the course, Student will be able to etime and space complexity of algorithms withins for various computing problems halyze the different algorithm design techniques for a given sting algorithms to improve efficiency. limitations of algorithms in problem solving.  en, Charles E.Leiserson, Ronald L. Rivest and Clift and Edition, PHI Learning Private Limited, 2012. ohn E. Hopcroft and Jeffrey D. Ullman, "Data Structurent 2006.	TOTAL:  lem, Biparti  ven problem  ford Stein,  es and Algo	"Introd	9 Hotem, Note that the search of the search	JR.

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

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

1902CS4	0.6	DATABASE MA	NACEME	NT SVSTEM	5	L	T	P	C
1902034	90	DATABASE MA		TI DIDILAL	95 at 1	3	0	0	3
PREREC	UISITES:			31 - 10		ω			2
	Programming 1	I anguages	Day -						
	OBJECTIVES	The second secon		-		- 6			
000100		erstand the fundamentals of	data model	s and concentra	ah hee arile	mict	a dat	alveca	-
		ing ER diagram	data model	s and concepta	anne and we	Pret	a uan	awase.	
A PRINCIPAL PRIN	The state of the s	ke a study of SQL and relati	onal databa	se design					
	The second secon	art knowledge in transaction		-	control tech	mior	ies ar	id rec	overv
	procedure					•			,
		w about data storage techni	ques a quer	y processing.					
		iliarize the students with the	The state of the s		ses.				
Module I		OUCTION						9 Ho	urs
Introduction	on to file system	n - Introduction to databas	e system -	Data Base Arc	hitecture - 1	Data	Inde	pende	mce -
View of I	ata - Instance a	and Schema- Data Models-	Types of	Data Models -	- Database I	ans	uage	- Dat	tabase
user and a	dministrator En	tity relationship model - Ma	moing Card	linalities-Keys,	E-R diagra	ms.			
Module I	QUERY	LANGUAGE & OPTIMI	ZATION					9 Ho	OF5
SQL -DD	L- DML-DCL-	ICL-Embedded SQL-Stand	Vs Dynan	iic SQL - Viev	vs – Constra	ints	- Tr	iggers	-Data
Base secur	rity and authoriz	ration-Overv processing and	optimizati	on - Functional	Dependent	ies-	Norm	aliza	tion
Module I	I TRANS	ACTION PROCESSING	V. T.					9 Ho	urs
Transactio	n Concepts - A	CID Properties-Need for	Concurrenc	y Control -Scl	hedules- Ser	iali:	zabili	y. Co	mflict
CONTRACTOR OF THE PROPERTY OF THE PARTY.	CONTRACTOR OF THE PARTY OF THE	Control - Locking Mechanis	COLUMN TO THE PARTY OF THE PART		THE RESERVE AND ADDRESS OF THE PARTY OF THE	B10	sed C	oncu	rency
Control -I		very Techniques-Immediate	update- De	ferred update-	shadow pag	ing.			
Module I		AND INDEXING						9 Ho	
Overview	of Physical S	torage Media-RAID -File	Organizat	ion-File opera	tions - Ha	shin	g Te	chniq	ues -
Indexing -	Single level and	l Multi-level Indexes-B+ tre	e Index Fil	es-B tree Index	Files.		100		
Module V		ICED TOPICS						9 Ho	
		nining and knowledge disco							
		ems - NOSOL introduction	n -Hbase d	lata model -Do	stabase Tun	ing	-Case	Stud	ly for
Design an	d Manage the D	atabase for any Project.			1		CONTRACTOR OF THE PARTY OF THE	-	
					TOTAL:	-	45 H	OUR!	S
FURTHE	R READING								
		wanced Database Technolog					MUL		
Appeller Street		ta mining and Data warehou	The same of the sa	Analytics					
AND REAL PROPERTY.	Name and Address of the Owner, where the Owner, which is the Owner, which the Owner, which is	EMPLOYABILIT		Section 1					*
	A STATE OF THE PARTY OF THE PAR	course, Student will be abl							
COl		e basic concepts of the datal	The state of the s	C-4 CHEST STATE OF					
CO2		abase using ER diagrams an						ation	ş
CO3	The Part and the Control of the Cont	owledge of query evaluatio		the second secon			S		
C04	Acquire the kn	iowledge about different sto	rage techni	ques and Quer	y Processing	5			
C05	Explain the ha	sic concepts of various type	s of Dataha	202					
REFERE		are concepts on some sign	armin's			4	5		
THE RESIDENCE OF THE PARTY OF T	A CONTRACTOR OF CONTRACTOR OF THE PROPERTY OF THE PARTY O	Henry F.Korth and S.Sundar	shan "Data	hase System C	oncents <sup>37</sup> S	ixth	Editi	OTT	
THE RESERVE AND THE RESERVE AN	Hill, 2017.		EXCHASE V					-	
		mkant B. Navathe, "Fundan	nentals of T	Istahase System	115.27				
	on, Pearson Edi		denients of T	remouse of sici					
Contraction of the last of the	- which the same of the same o	nd Carolyn E. Begg, —Data	base System	os - A Practica	Approach	to D	esjen		
		agement, fifth edition, Pear					-	*	
		l S.Swamynathan, —An Int			temsL Eight	h E	lition	Pear	50II
Education	2012.			A	TESTED	2	4		
		-Database Management Sy	stemst. Fou	rth Edition. Me	Craw-Hill	Coll	ege		
The second second second	STATE OF THE OWNER, WHEN PARTY AND THE OWNER	THE RESIDENCE OF THE PROPERTY	NAME OF TAXABLE PARTY.	CONTRACTOR OF THE PARTY.	NAME OF TAXABLE PARTY.	DATE	COLUMN TWO	THE OWNER OF THE OWNER,	DOMESTICAL PROPERTY.

PRINCIPAL
PRINCIPAL
E.G.S. Pillay Engineering College,
Thethi, Nagore - 611 102
Nagapattinam (Dt) Termi reasola

T P C	T	1 3	OLOGY FOR ENGINEERS	BIOLOGY FOR E	EX04	1901GEX
	~	-	jective of this course is to enable learners	CTIVES: The objective of this cou	E OBJECTIVES	COURSE
		ering.	ts of biology and its applications in engin	concepts of biology and		
7 Hours	-	5/4	n and its Classification	Biology Introduction and its Classifi	I Biology	Module I
			al differences between science and e			
need to study	- need	of biology	Bird flying and aircraft. Exciting aspect	een eye and camera, Bird flying and a	son between eye	omparison
			observations of 18th Century - major of			
			hermodynamics - original observation o			
			rical, biochemical or ecological. Hie			
			on based on (a) cellularity- Unicel			
			otes. (c) energy and Carbon utilization			
			aminotelic, uricoteliec, ureotelic (e) Hab kingdoms of life. Model organisms for t			
ology- E.con,	010105	e study of		felanogaster, C. elegance, A. Thaliana,		
10 Hours	-		The state of the s	Genetics and Macromolecular analy	The second secon	fodule II
					Name and Address of the Owner, where the Owner, which is the Owner, where the Owner, which is the Owner, where the Owner, which is the Owner, which i	
			Sciences"- Mendel's laws, Concept of s			
			napping, Gene interaction, Epistasis. Me			
genes. Single	o gen	thenotype t	nd dominance. Concept of mapping of			
		and Destain	itanon using munan generics.	humans. Complementation using huma	orgers in mimans.	ene cusoro
			biological processes at the reductionistic			
e. Proteins as	me. P	nary suuci	e. Primary secondary, tertiary and quate	it in protein structure. Primary second iters, receptors and structural elements.		
10 Hours	-			Biomolecules and Enzymes		Aodule II
			ALL TARCS	Diomoner mes una rurimes		Committee of the Commit
and callulace	in mount	page charr	nomenic impressed nolumeric etractures	tologuies of his monomone imits and	critics - Molecules	
and cellulose.	h and		nomeric units and polymeric structures. S			
		oids.	and DNA/RNA. Two carbon units and li	proteins. Nucleotides and DNA/RNA.	cids and proteins.	mino acid
classification.	e clas	oids. s. Enzyme	and DNA/RNA. Two carbon units and li zed reactions. Enzyme catalyzereaction	proteins. Nucleotides and DNA/RNA. itor enzyme catalyzed reactions. E	cids and proteins s - monitor enz	mino acio nzymes
classification. atalysis.	e clas	oids. s. Enzyme neters. RNA	and DNA/RNA. Two carbon units and li zed reactions. Enzyme catalyzereaction imples. Enzyme kinetics and kinetic parar	proteins. Nucleotides and DNA/RNA. itor enzyme catalyzed reactions. E zyme action -two examples. Enzyme ki	cids and proteins. s - monitor enz ism of enzyme act	lmino acid Inzymes Mechanisn
classification. atalysis. n - universal	e clas Loatal tion -	oids. s. Enzyme neters. RNA ic informat	and DNA/RNA. Two carbon units and li zed reactions. Enzyme catalyzereaction imples. Enzyme kinetics and kinetic parar ar basis of coding and decoding general	proteins. Nucleotides and DNA/RNA. itor enzyme catalyzed reactions. E zyme action -two examples. Enzyme ki isfer - The molecular basis of codin	cids and proteins. s - monitor enz ism of enzyme act tion Transfer - T	amino acio inzymes Mechanism aformatio
classification. atalysis. n - universal e- from single	e clas A catal tion -	oids. s. Enzyme neters. RNA ic informat ONA structi	and DNA/RNA. Two carbon units and li zed reactions. Enzyme catalyzereaction imples. Enzyme kinetics and kinetic parar ar basis of coding and decoding general. DNA - genetic material. Hierarchy of	proteins. Nucleotides and DNA/RNA. itor enzyme catalyzed reactions. Exyme action -two examples. Enzyme kinsfer - The molecular basis of coding information transfer. DNA - genetic	cids and proteins.  s - monitor enz  ism of enzyme act  tion Transfer - T  ar basis of inform	amino acio inzymes Mechanism nformation Molecular
classification. atalysis. n - universal e- from single	e clas A catal tion -	oids. s. Enzyme neters. RNA ic informat ONA structi	and DNA/RNA. Two carbon units and li zed reactions. Enzyme catalyzereaction imples. Enzyme kinetics and kinetic parameters are basis of coding and decoding general. DNA - genetic material. Hierarchy of thes. Concept of genetic code. Universality	proteins. Nucleotides and DNA/RNA. itor enzyme catalyzed reactions. Exyme action -two examples. Enzyme kinsfer - The molecular basis of coding information transfer. DNA - genetic	cids and proteins s - monitor enz ism of enzyme act tion Transfer - T ar basis of inform I to double helix to	mino acio nzymes fechanism formatio folecular randed to
classification. atalysis. n - universal e- from single acy of genetic 8 Hours	e clas l catal tion - ture- fi eracy	oids. s. Enzyme neters. RNA ic informat ONA structs and degen	and DNA/RNA. Two carbon units and li zed reactions. Enzyme catalyzereaction imples. Enzyme kinetics and kinetic parar ar basis of coding and decoding general er. DNA - genetic material. Hierarchy of hes. Concept of genetic code. Universality on and recombination.	proteins. Nucleotides and DNA/RNA. itor enzyme catalyzed reactions. E zyme action -two examples. Enzyme kinsfer - The molecular basis of coding information transfer. DNA - genetic e helix to nucleosomes. Concept of genes of complementation and recombinate Metabolism and Microbiology	acids and proteins.  s - monitor enz ism of enzyme act tion Transfer - T ar basis of inform t to double helix to the in terms of cor TV Metabo	mino acio nzymes lechanism dormation lolecular randed to ode. Gene lodule IV
classification. atalysis. n - universal e- from single acy of genetic 8 Hours	e clas l catal tion - ture- fi eracy	oids. s. Enzyme neters. RNA ic informat ONA structs and degen	and DNA/RNA. Two carbon units and li zed reactions. Enzyme catalyzereaction imples. Enzyme kinetics and kinetic parar ar basis of coding and decoding general er. DNA - genetic material. Hierarchy of hes. Concept of genetic code. Universality on and recombination.	proteins. Nucleotides and DNA/RNA. itor enzyme catalyzed reactions. E zyme action -two examples. Enzyme kinsfer - The molecular basis of coding information transfer. DNA - genetic e helix to nucleosomes. Concept of genes of complementation and recombinate Metabolism and Microbiology	acids and proteins.  s - monitor enz ism of enzyme act tion Transfer - T ar basis of inform t to double helix to the in terms of cor TV Metabo	mino acio nzymes lechanism formation olecular randed to de. Gene lodule IV
classification. atalysis. n - universal e- from single acy of genetic 8 Hours tothermic and standard free	e clas A catal tion - ture- fi eracy Exoth	oids. s. Enzyme neters. RNA ic informat ONA structs and degen systems. I	and DNA/RNA. Two carbon units and li zed reactions. Enzyme catalyzereaction imples. Enzyme kinetics and kinetic parar- ar basis of coding and decoding gene- er. DNA - genetic material. Hierarchy of les. Concept of genetic code. Universality on and recombination. icrobiology insactions. Thermodynamics to biological exergoinc reactions. Concept of Keq and	proteins. Nucleotides and DNA/RNA. itor enzyme catalyzed reactions. E zyme action -two examples. Enzyme kinsfer - The molecular basis of codin of information transfer. DNA - genetic e helix to nucleosomes. Concept of genes of complementation and recombinate Metabolism and Microbiology ciples of energy transactions. Thermous endergonic and exergoinc reactions	acids and proteins.  s - monitor enz ism of enzyme act tion Transfer - T ar basis of inform t to double helix to ene in terms of cor IV Metabo ism: principles of mic versus ender	mino acio nzymes iechanism formation olecular randed to ide. Gene lodule IV etabolism idotherm
classification. atalysis. n - universal e- from single acy of genetic 8 Hours othermic and standard free sis and Krebs	e clas A catal tion - ture- fr eracy Exothe to star	oids. s. Enzyme neters. RNA ic informat ONA structs and degen systems. I ts relation	and DNA/RNA. Two carbon units and li zed reactions. Enzyme catalyzereaction imples. Enzyme kinetics and kinetic parar ar basis of coding and decoding general. DNA - genetic material. Hierarchy of hes. Concept of genetic code. Universality on and recombination. icrobiology insactions. Thermodynamics to biological exergoinc reactions. Concept of Keq and mency. Breakdown of glucose to CO2 +	proteins. Nucleotides and DNA/RNA.  itor enzyme catalyzed reactions. E zyme action -two examples. Enzyme ki sfer - The molecular basis of codin of information transfer. DNA - genetic e helix to nucleosomes. Concept of ge- ms of complementation and recombinat Metabolism and Microbiology ciples of energy transactions. Therms us endergonic and exergoinc reactions ity. ATP - energy currency. Breakdow	acids and proteins.  s - monitor enz ism of enzyme act tion Transfer - T ar basis of inform to double helix to ene in terms of cor IV Metabo ism: principles of mic versus ender Spontaneity. ATP	mino acio nzymes fechanism formation folecular randed to ode. Gene fodule IV fetabolism nergy. Sp
classification. atalysis. n - universal e- from single acy of genetic 8 Hours othermic and standard free sis and Krebs	e clas A catal tion - ture- fr eracy Exothe to star	oids. s. Enzyme neters. RNA ic informat ONA structs and degen systems. I ts relation	and DNA/RNA. Two carbon units and li zed reactions. Enzyme catalyzereaction imples. Enzyme kinetics and kinetic parar- ar basis of coding and decoding gene- er. DNA - genetic material. Hierarchy of les. Concept of genetic code. Universality on and recombination. icrobiology insactions. Thermodynamics to biological exergoinc reactions. Concept of Keq and	proteins. Nucleotides and DNA/RNA.  itor enzyme catalyzed reactions. E  zyme action -two examples. Enzyme ki  sfer - The molecular basis of codin  of information transfer. DNA - genetic  e helix to nucleosomes. Concept of genes of complementation and recombinat  Metabolism and Microbiology  ciples of energy transactions. Therms  us endergonic and exergoinc reactions  ity. ATP - energy currency. Breakdow,  of glucose from CO2 and H2O (Photo	acids and proteins.  s - monitor enzism of enzyme act tion Transfer - T ar basis of inform to double helix to the in terms of cor TV Metabolism: principles of mic versus ender Spontaneity. ATP synthesis of gluco	mino acio nzymes fechanism formation folecular randed to ode. Gene fodule IV fetabolism nergy. Sp ycle) - syr
classification. atalysis. n - universal e- from single acy of genetic  8 Hours othermic and standard free sis and Krebs gy consuming	e clas l catal tion - ture- fi eracy  Exoth to star blysis	s. Enzyme seters. RNA ic informat DNA structs and degen- systems. I ts relation E2O (Glyco ling and en	and DNA/RNA. Two carbon units and li- zed reactions. Enzyme catalyzereaction imples. Enzyme kinetics and kinetic parar ar basis of coding and decoding general. DNA - genetic material. Hierarchy of less. Concept of genetic code. Universality on and recombination. icrobiology insactions. Thermodynamics to biological erency. Breakdown of glucose to CO2 + 12 and H2O (Photosynthesis). Energy yiel	proteins. Nucleotides and DNA/RNA.  itor enzyme catalyzed reactions. E  zyme action -two examples. Enzyme ki  isfer - The molecular basis of codin  of information transfer. DNA - genetic  e helix to nucleosomes. Concept of ge-  ms of complementation and recombinate  Metabolism and Microbiology  ciples of energy transactions. Therms  us endergonic and exergoinc reactions  ity. ATP - energy currency. Breakdow,  of glucose from CO2 and H2O (Photo  of to finergy charge	acids and proteins.  s - monitor enzism of enzyme act tion Transfer - T ar basis of inform to double helix to ene in terms of cor IV Metabo ism: principles of mic versus ender Spontaneity. ATP synthesis of gluco s. Concept of Ener	mino acio nzymes fechanism formation folecular randed to ode. Gene fodule IV fetabolism ndothema nergy. Sp vcle) - syn factions. (
classification. atalysis. n - universal e- from single acy of genetic  8 Hours tothermic and standard free sis and Krebs gy consuming	e clas A catal tion - ture- fr eracy Exoth to star olysis : ergy c	s. Enzyme seters. RNA ic informat ONA structs and degene systems. I ts relation 120 (Glyco ling and en-	and DNA/RNA. Two carbon units and li zed reactions. Enzyme catalyzereaction imples. Enzyme kinetics and kinetic parar ar basis of coding and decoding general. DNA - genetic material. Hierarchy of less. Concept of genetic code. Universality on and recombination. icrobiology insactions. Thermodynamics to biological exergoinc reactions. Concept of Keq and rency. Breakdown of glucose to CO2 + 2 and H2O (Photosynthesis). Energy yiel	proteins. Nucleotides and DNA/RNA.  itor enzyme catalyzed reactions. E zyme action -two examples. Enzyme ki sfer - The molecular basis of codir of information transfer. DNA - genetic e helix to nucleosomes. Concept of ge ms of complementation and recombinat Metabolism and Microbiology ciples of energy transactions. Therms us endergonic and exergoinc reactions ity. ATP - energy currency. Breakdow of glucose from CO2 and H2O (Photo of Energy charge uncept of single celled organisms. C	acids and proteins.  S - monitor enzism of enzyme act tion Transfer - T ar basis of inform to double helix to the in terms of cor IV Metabo tism: principles of mic versus ender Spontaneity. ATP synthesis of gluco to concept of Ener to concept of Ener to concept of the concept of	mino acio nzymes fechanism formation folecular rranded to ode. Gene fodule IV fetabolism nergy. Sp ycle) - syn eactions. (
classification. atalysis. n - universal e- from single acy of genetic  8 Hours tothermic and standard free sis and Krebs gy consuming	e clas A catal tion - ture- fr eracy Exoth to star olysis : ergy c	s. Enzyme seters. RNA ic informat ONA structs and degene systems. I ts relation 120 (Glyco ling and en-	and DNA/RNA. Two carbon units and li- zed reactions. Enzyme catalyzereaction imples. Enzyme kinetics and kinetic parar ar basis of coding and decoding general DNA - genetic material. Hierarchy of less. Concept of genetic code. Universality on and recombination. icrobiology insactions. Thermodynamics to biological exergoinc reactions. Concept of Keq and rency. Breakdown of glucose to CO2 + 2 and H2O (Photosynthesis). Energy yiel led organisms. Concept of species and roscopy. Ecological aspects of single cel	proteins. Nucleotides and DNA/RNA.  itor enzyme catalyzed reactions. E zyme action -two examples. Enzyme ki asfer - The molecular basis of codin of information transfer. DNA - genetic e helix to nucleosomes. Concept of ge ms of complementation and recombinat Metabolism and Microbiology ciples of energy transactions. Therm us endergonic and exergoinc reactions ity. ATP - energy currency. Breakdow of glucose from CO2 and H2O (Photo of Energy charge uncept of single celled organisms. C microorganisms. Microscopy. Ecologic	acids and proteins.  S - monitor enzism of enzyme act tion Transfer - T ar basis of inform to double helix to the in terms of cor IV Metabol tism: principles of mic versus ender Spontaneity. ATP synthesis of gluco to Concept of Ener cology Concept of ation of microorgy	mino acio nzymes lechanism dormation lolecular randed to ode. Gene lodule IV letabolism nergy. Sp vcle) - syn lactions. ( licrobiolo assifications)
classification. atalysis. n - universal e- from single acy of genetic 8 Hours cothermic and standard free sis and Krebs gy consuming dification and sterilization	e clas A catal tion - ture- fr eracy Exoth to star olysis : ergy c	s. Enzyme seters. RNA ic informat ONA structs and degene systems. I ts relation 120 (Glyco ling and en-	and DNA/RNA. Two carbon units and li- zed reactions. Enzyme catalyzereaction imples. Enzyme kinetics and kinetic parar ar basis of coding and decoding general. DNA - genetic material. Hierarchy of less. Concept of genetic code. Universality on and recombination. icrobiology insactions. Thermodynamics to biological energy Breakdown of glucose to CO2 + 12 and H2O (Photosynthesis). Energy yiel led organisms. Concept of species and roscopy. Ecological aspects of single cel fices.	proteins. Nucleotides and DNA/RNA.  itor enzyme catalyzed reactions. E zyme action -two examples. Enzyme ki sfer - The molecular basis of codin of information transfer. DNA - genetic e helix to nucleosomes. Concept of ge ms of complementation and recombinat Metabolism and Microbiology ciples of energy transactions. Therms us endergonic and exergoinc reactions ity. ATP - energy currency. Breakdow, of glucose from CO2 and H2O (Photo of of Energy charge oncept of single celled organisms. Comicroorganisms. Microscopy. Ecologic sitions. Growth kinetics	acids and proteins.  s - monitor enzism of enzyme act tion Transfer - T ar basis of inform to double helix to the in terms of cor TV Metabolism: principles of mic versus ender Spontaneity. ATP synthesis of gluco to Concept of Ener cology Concept of ation of microorg tia compositions.	mino acio nzymes lechanism formation folecular randed to de. Gene lodule IV letabolism adotherm nergy. Sp vcle) – syn actions. ( licrobiolo assification d media
classification. atalysis. n - universal e- from single acy of genetic  8 Hours othermic and standard free sis and Krebs gy consuming tification and Sterilization	e clas l catal tion - ture- fi eracy  Exoth to star olysis : ergy c	s. Enzyme s. Enzyme neters. RNA ic informat DNA structs and degen- systems. I ts relation H2O (Glyco ling and en- strains. Ide- ed organisa	and DNA/RNA. Two carbon units and li- zed reactions. Enzyme catalyzereaction imples. Enzyme kinetics and kinetic parar- ar basis of coding and decoding gene- er. DNA - genetic material. Hierarchy of less. Concept of genetic code. Universality on and recombination. icrobiology insactions. Thermodynamics to biological acergoinc reactions. Concept of Keq and rency. Breakdown of glucose to CO2 + 12 and H2O (Photosynthesis). Energy yiel led organisms. Concept of species and roscopy. Ecological aspects of single cel- lics. eering	proteins. Nucleotides and DNA/RNA.  itor enzyme catalyzed reactions. E  zyme action -two examples. Enzyme ki  sfer - The molecular basis of codin  of information transfer. DNA - genetic  e helix to nucleosomes. Concept of ge-  ms of complementation and recombinat  Metabolism and Microbiology  ciples of energy transactions. Therms  us endergonic and exergoinc reactions  ity. ATP - energy currency. Breakdow  of glucose from CO2 and H2O (Photo  of Energy charge  mcept of single celled organisms. Comicroorganisms. Microscopy. Ecologic  sitions. Growth kinetics  Bio-inspired Engineering	ism of enzyme act tion Transfer - Tar basis of inform to double helix to ene in terms of cor IV Metabolism: principles of mic versus ender Spontaneity. ATP synthesis of glucos. Concept of Enerology Concept of ation of microorgatic compositions of Westernaments.	mino acio nzymes fechanism formation folecular randed to ode. Gene fodule IV fetabolism nergy. Sp vcle) - syn factions. ( ficrobiolo assification d media fodule V
classification. atalysis. n - universal e- from single acy of genetic 8 Hours othermic and standard free sis and Krebs gy consuming dification and Sterilization applications):	e clas A catal tion - ture- fr eracy Exoth to star olysis ergy come. St	s. Enzyme s. Enzyme eters. RNA ic informat ONA structs and degen- systems. I ts relation EDO (Glyco- ling and en- strains. Ide- ed organisa	and DNA/RNA. Two carbon units and li- zed reactions. Enzyme catalyzereaction imples. Enzyme kinetics and kinetic parar ar basis of coding and decoding general DNA - genetic material. Hierarchy of less. Concept of genetic code. Universality on and recombination. icrobiology insactions. Thermodynamics to biological exergoinc reactions. Concept of Keq and rency. Breakdown of glucose to CO2 + 2 and H2O (Photosynthesis). Energy yiel led organisms. Concept of species and roscopy. Ecological aspects of single cel fices eering designs (BID for Biomedical and No	proteins. Nucleotides and DNA/RNA.  itor enzyme catalyzed reactions. E zyme action -two examples. Enzyme ki sfer - The molecular basis of codir of information transfer. DNA - genetic e helix to nucleosomes. Concept of ge ms of complementation and recombinat Metabolism and Microbiology ciples of energy transactions. Therm us endergonic and exergoinc reactions ity. ATP - energy currency. Breakdow of glucose from CO2 and H2O (Photo of Energy charge incept of single celled organisms. Concept of single celled organisms.	ism of enzyme act tion Transfer - Tar basis of inform to double helix to the ene in terms of correct Metabolism: principles of mic versus ender. Spontaneity. ATP synthesis of glucos. Concept of Enerology Concept of ation of microorgalia compositions. Concept of Bio-inspition to biological	mino acio inzymes fechanism formation folecular tranded to ode. Gene fodule IV fetabolism ndotherm nergy. Sp ycle) - syn eactions. ( ficrobiolo lassification ad media fodule V ntroduction
classification. atalysis. n - universal e- from single acy of genetic 8 Hours tothermic and standard free sis and Krebs gy consuming tification and Sterilization applications); wery; Genetic	Exotheracy  Exotheracy  Exotheracy  entifications. States  al apprelivery	s. Enzyme s. Enzyme neters. RNA ic informat DNA structi and degen- systems. It is relation E2O (Glyco- ling and en- strains. Id- ed organisa i-biomedica or Drug De	and DNA/RNA. Two carbon units and li- zed reactions. Enzyme catalyzereaction imples. Enzyme kinetics and kinetic parar ar basis of coding and decoding general. DNA - genetic material. Hierarchy of less. Concept of genetic code. Universality on and recombination. icrobiology insactions. Thermodynamics to biological exergoinc reactions. Concept of Keq and rency. Breakdown of glucose to CO2 + 2 and H2O (Photosynthesis). Energy yiel led organisms. Concept of species and roscopy. Ecological aspects of single cel fices eering designs (BID for Biomedical and No iopolymers; Bio-optics; Nanostructures;	proteins. Nucleotides and DNA/RNA.  itor enzyme catalyzed reactions. E zyme action -two examples. Enzyme ki aster - The molecular basis of codin of information transfer. DNA - genetic e helix to nucleosomes. Concept of ge ms of complementation and recombinat Metabolism and Microbiology caples of energy transactions. Therms us endergonic and exergoinc reactions ity. ATP - energy currency. Breakdow, of glucose from CO2 and H2O (Photo of of Energy charge incept of single celled organisms. Concept of single celled organisms.	ism of enzyme act tion Transfer - T ar basis of inform to double helix to the in terms of cor IV Metabol tism: principles of mic versus ender Spontaneity. ATP synthesis of gluco to Concept of Ener to logy Concept of ation of microorg tia compositions of V Bio-inst tion to biologica organs-on-chips;	mino acio nzymes lechanism formation lolecular randed to ode. Gene lodule IV letabolism nergy. Sp vcle) - syn actions. ( licrobiolo assification d media lodule V stroduction uman-org
classification. atalysis. n - universal e- from single acy of genetic 8 Hours tothermic and standard free sis and Krebs gy consuming dification and Sterilization 10 Hours applications): ivery; Genetic e in medical	Exother to star obysis sergy comms. St	s. Enzyme s. Enzyme neters. RNA ic informat DNA structi and degen systems. It ts relation DO (Glyco ling and en strains. Ide ed organisa i-biomedica or Drug De osensors: r	and DNA/RNA. Two carbon units and li- zed reactions. Enzyme catalyzereaction imples. Enzyme kinetics and kinetic parar ar basis of coding and decoding general er. DNA - genetic material. Hierarchy of less. Concept of genetic code. Universality on and recombination. icrobiology insactions. Thermodynamics to biological exergoinc reactions. Concept of Keq and rency. Breakdown of glucose to CO2 + 12 and H2O (Photosynthesis). Energy yiel led organisms. Concept of species and roscopy. Ecological aspects of single cel fics. eering designs (BID for Biomedical and No iopolymers; Bio-optics; Nanostructures in this; Swarm intelligence algorithms; Bio- designs (BID for Biomedical and No iopolymers; Bio-optics; Nanostructures in the catalyzer and the catalyzer algorithms; Bio- iopolymers; Bio-optics; Nanostructures in the catalyzer and catalyzer and catalyzer algorithms; Bio- iopolymers; Bio-optics; Nanostructures in the catalyzer and cata	proteins. Nucleotides and DNA/RNA.  itor enzyme catalyzed reactions. E zyme action -two examples. Enzyme ki sfer - The molecular basis of codin of information transfer. DNA - genetic e helix to nucleosomes. Concept of ge ms of complementation and recombinat Metabolism and Microbiology ciples of energy transactions. Therms us endergonic and exergoinc reactions ity. ATP - energy currency. Breakdow, of glucose from CO2 and H2O (Photo of Energy charge oncept of single celled organisms. Comicroorganisms. Microscopy. Ecologic sitions. Growth kinetics Bio-inspired Engineering piologically-inspired designs (BID for a-chips; Muscular Biopolymers; Bio-c ficial neural networks; Swarm intel	ism of enzyme act tion Transfer - T ar basis of inform to double helix to the in terms of cor TV Metabol tism: principles of t	mino acio nzymes fechanism formation folecular randed to ode. Gene fodule IV fetabolism nergy. Sp ycle) - syn eactions. ( ficrobiolo assification d media fodule V ntroductio fuman-org lgorithms
classification. atalysis. n - universal e- from single acy of genetic 8 Hours tothermic and standard free sis and Krebs gy consuming dification and Sterilization 10 Hours applications): ivery; Genetic e in medical	Exother to star obysis sergy comms. St	s. Enzyme s. Enzyme neters. RNA ic informat DNA structi and degen systems. It ts relation DO (Glyco ling and en strains. Ide ed organisa i-biomedica or Drug De osensors: r	and DNA/RNA. Two carbon units and li- zed reactions. Enzyme catalyzereaction imples. Enzyme kinetics and kinetic parar ar basis of coding and decoding general. DNA - genetic material. Hierarchy of less. Concept of genetic code. Universality on and recombination. icrobiology insactions. Thermodynamics to biological exergoinc reactions. Concept of Keq and rency. Breakdown of glucose to CO2 + 2 and H2O (Photosynthesis). Energy yiel led organisms. Concept of species and roscopy. Ecological aspects of single cel fices eering designs (BID for Biomedical and No iopolymers; Bio-optics; Nanostructures;	proteins. Nucleotides and DNA/RNA.  itor enzyme catalyzed reactions. Exyme action -two examples. Enzyme kinsfer - The molecular basis of coding information transfer. DNA - genetic election to nucleosomes. Concept of genes of complementation and recombinate Metabolism and Microbiology caples of energy transactions. Thermous endergonic and exergoinc reactions ity. ATP - energy currency. Breakdow of glucose from CO2 and H2O (Photost of Energy charge microorganisms. Microscopy. Ecologic sitions. Growth kinetics.  Bio-inspired Engineering prologically-inspired designs (BID for a chips; Muscular Biopolymers; Bio-official neural networks; Swarm intelligent digital plaster); environmental more	ism of enzyme act tion Transfer - T ar basis of inform to double helix to the in terms of cor  IV Metabo ism: principles of mic versus ender Spontaneity. ATP synthesis of gluco s. Concept of Ener cology Concept of ation of microorga is compositions ( V Bio-insy tion to biologica organs-on-chips; ims; Artificial ner tics (Sensium digit	mino acio nzymes fechanism formatio folecular randed to ode. Gene fodule IV fetabolism nergy. Sp vcle) - syn eactions. ( ficrobiolo assificatio d media fodule V ntroductio fuman-org lgorithms lagnostics
classification. atalysis. n - universal e- from single acy of genetic  8 Hours othermic and standard free sis and Krebs gy consuming tification and Sterilization  10 Hours applications): very; Genetic e in medical Diso-printing;	Exother to star obysis sergy comms. St	s. Enzyme s. Enzyme seters. RNA ic informat DNA structs and degen- systems. I ts relation E2Q (Glyco- ling and en- strains. Ide ed organism biomedica or Drug De osensors: r -robotics; 3	and DNA/RNA. Two carbon units and li- zed reactions. Enzyme catalyzereaction imples. Enzyme kinetics and kinetic parar ar basis of coding and decoding general er. DNA - genetic material. Hierarchy of less. Concept of genetic code. Universality on and recombination. icrobiology insactions. Thermodynamics to biological exergoinc reactions. Concept of Keq and rency. Breakdown of glucose to CO2 + 12 and H2O (Photosynthesis). Energy yiel led organisms. Concept of species and roscopy. Ecological aspects of single cel fics. eering designs (BID for Biomedical and No iopolymers; Bio-optics; Nanostructures in this; Swarm intelligence algorithms; Bio- designs (BID for Biomedical and No iopolymers; Bio-optics; Nanostructures in the catalyzer and the catalyzer algorithms; Bio- iopolymers; Bio-optics; Nanostructures in the catalyzer and catalyzer and catalyzer algorithms; Bio- iopolymers; Bio-optics; Nanostructures in the catalyzer and cata	proteins. Nucleotides and DNA/RNA.  itor enzyme catalyzed reactions. Exyme action -two examples. Enzyme kinsfer - The molecular basis of coding information transfer. DNA - genetic election to nucleosomes. Concept of genes of complementation and recombinate Metabolism and Microbiology caples of energy transactions. Thermous endergonic and exergoinc reactions ity. ATP - energy currency. Breakdow of glucose from CO2 and H2O (Photost of Energy charge microorganisms. Microscopy. Ecologic sitions. Growth kinetics.  Bio-inspired Engineering prologically-inspired designs (BID for a chips; Muscular Biopolymers; Bio-official neural networks; Swarm intelligent digital plaster); environmental more	ism of enzyme act tion Transfer - T ar basis of inform to double helix to the in terms of cor TV Metabol tism: principles of t	mino acionzymes fechanism formation folecular randed to ode. Gene fodule IV fetabolism nergy. Sp ycle) - syn eactions. ( ficrobiolo lassification d media fodule V ntroduction fuman-org lgorithms iagnostics
classification. atalysis. n - universal e- from single acy of genetic  8 Hours tothermic and standard free sis and Krebs gy consuming infication and Sterilization  10 Hours applications): very; Genetic e in medical bio-printing;	Exother to star olysis: ergy comms. Star olysis: all apprelivery role in the s	s. Enzyme s. Enzyme neters. RNA ic informat DNA structi and degen systems. It ts relation DO (Glyco ling and en strains. Ide ed organisa i-biomedica or Drug De osensors: r	and DNA/RNA. Two carbon units and lized reactions. Enzyme catalyzereaction imples. Enzyme kinetics and kinetic parara ar basis of coding and decoding general DNA - genetic material. Hierarchy of ites. Concept of genetic code. Universality on and recombination.  icrobiology  insactions. Thermodynamics to biological energy in the property of the property of the property of the property. Energy yields or ganisms. Concept of species and roscopy. Ecological aspects of single celebrates are designs (BID for Biomedical and Notiopolymers; Bio-optics; Nanostructures and the property of the pr	proteins. Nucleotides and DNA/RNA.  itor enzyme catalyzed reactions. E zyme action -two examples. Enzyme ki sfer - The molecular basis of codin of information transfer. DNA - genetic e helix to nucleosomes. Concept of ge ms of complementation and recombinat Metabolism and Microbiology ciples of energy transactions. Therms us endergonic and exergoinc reactions ity. ATP - energy currency. Breakdow of glucose from CO2 and H2O (Photo of of Energy charge oncept of single celled organisms. Conicroorganisms. Microscopy. Ecologic sitions. Growth kinetics  Bio-inspired Engineering piologically-inspired designs (BID for a-chips; Muscular Biopolymers; Bio-o- ficial neural networks; Swarm intel- ium digital plaster); environmental mo- rete.	ism of enzyme act tion Transfer - T ar basis of inform to double helix to the in terms of cor TV Metabol tism: principles of mic versus ender Spontaneity. ATP synthesis of gluco to Concept of Ener to logy Concept of ation of microorg tia compositions of V Bio-inst tion to biologica organs-on-chips; tins; Artificial ne tics (Sensium digit ling concrete.	mino acio nzymes fechanism formation folecular randed to ode. Gene fodule IV fetabolism dotherm nergy. Sp vcle) - syn actions. (ficrobiolo assification d media fodule V ntroductio numan-org lgorithme lagnostics elf healin
classification. atalysis. n - universal e- from single acy of genetic  8 Hours othermic and standard free sis and Krebs gy consuming tification and Sterilization  10 Hours applications): very; Genetic e in medical Diso-printing;	Exother to star olysis: ergy comms. Star olysis: all apprelivery role in the s	s. Enzyme s. Enzyme seters. RNA ic informat DNA structs and degen- systems. I ts relation E2Q (Glyco- ling and en- strains. Ide ed organism biomedica or Drug De osensors: r -robotics; 3	and DNA/RNA. Two carbon units and lized reactions. Enzyme catalyzereaction imples. Enzyme kinetics and kinetic parara ar basis of coding and decoding general DNA - genetic material. Hierarchy of ites. Concept of genetic code. Universality on and recombination icrobiology insactions. Thermodynamics to biological xergoinc reactions. Concept of Keq and irrency. Breakdown of glucose to CO2 + 2 and H2O (Photosynthesis). Energy yielded organisms. Concept of species and iroscopy. Ecological aspects of single celling designs (BID for Biomedical and Noticepolymers; Bio-optics; Nanostructures in the composition of the composition intelligence algorithms; Bio-optics; Swarm intelligence algorithms; Bio-optics; Bio-filters; Bio-DEVEL-OPMEN	proteins. Nucleotides and DNA/RNA.  itor enzyme catalyzed reactions. Exyme action -two examples. Enzyme kinsfer - The molecular basis of coding information transfer. DNA - genetic e helix to nucleosomes. Concept of genes of complementation and recombinate Metabolism and Microbiology caples of energy transactions. Thermous endergonic and exergoinc reactions ity. ATP - energy currency. Breakdow of glucose from CO2 and H2O (Photost of Energy charge oncept of single celled organisms. Concept of single celled organisms.	ism of enzyme act tion Transfer - Tar basis of inform to double helix to the ene in terms of cor IV Metabolism: principles of mic versus ender Spontaneity. ATP synthesis of glucos. Concept of Enerology Concept of ation of microorgitia compositions. O Bio-inspirion to biologica organs-on-chips; Ims; Artificial nerics (Sensium digitaling concrete.	mino acionzymes fechanism formation folecular randed to ode. Gene fodule IV fetabolism ndotherm nergy. Sp ycle) - syr eactions. ( ficrobiolo lassification d media fodule V atroductio fuman-org lgorithm iagnostics elf healin
classification. atalysis. n - universal e- from single acy of genetic  8 Hours tothermic and standard free sis and Krebs gy consuming infication and Sterilization  10 Hours applications): ivery; Genetic e in medical Rio-printing;	e clas l catal tion - ture- fi eracy  Exoth to star olysis : ergy c entific ms. St al app elivery role in	s. Enzyme s. Enzyme neters. RNA ic informat DNA structs and degend systems. I ts relation DO (Glyco ling and en strains. Ide ed organism debiomedical or Drug De osensors: re- robotics; 3	and DNA/RNA. Two carbon units and lized reactions. Enzyme catalyzereaction imples. Enzyme kinetics and kinetic parara ar basis of coding and decoding general DNA - genetic material. Hierarchy of ites. Concept of genetic code. Universality on and recombination icrobiology insactions. Thermodynamics to biological sergoinc reactions. Concept of Keq and irrency. Breakdown of glucose to CO2 + 2 and H2O (Photosynthesis). Energy yiel led organisms. Concept of species and iroscopy. Ecological aspects of single cellifics.  Beautiful for Biomedical and No iopolymers; Bio-optics; Nanostructures in the composition intelligence algorithms; Bio-optics; Swarm intelligence algorithms; Bio-optics; Bio-	proteins. Nucleotides and DNA/RNA.  itor enzyme catalyzed reactions. Exyme action -two examples. Enzyme kinsfer - The molecular basis of coding information transfer. DNA - genetic e helix to nucleosomes. Concept of genes of complementation and recombinate Metabolism and Microbiology caples of energy transactions. Thermous endergonic and exergoinc reactions ity. ATP - energy currency. Breakdow of glucose from CO2 and H2O (Photost of Energy charge oncept of single celled organisms. Conicroorganisms. Microscopy. Ecological sitions. Growth kinetics.  Bio-inspired Engineering biologically-inspired designs (BID for a chips; Muscular Biopolymers; Bio-official neural networks; Swarm intelligent digital plaster); environmental morete.	ism of enzyme act tion Transfer - T ar basis of inform to double helix to ene in terms of cor IV Metabo ism: principles of mic versus ender Spontaneity. ATP synthesis of gluco s. Concept of Ener cology Concept of ation of microorgy lia compositions ( V Bio-insp tion to biologica organs-on-chips; I ms; Artificial ner tics (Sensium digit ling concrete.  E OUTCOMES: Upon completion	mino acionzymes fechanism formation folecular randed to ode. Gene fodule IV fetabolism ndothema nergy. Sp ycle) - syn eactions. ( ficrobiolo lassification d media fodule V utroduction fuman-org lgorithm iagnostics elf healin  OURSE  U
classification. atalysis. n - universal e- from single acy of genetic  8 Hours tothermic and standard free sis and Krebs gy consuming infication and Sterilization  10 Hours applications): very; Genetic e in medical bio-printing;	Exother to standard apprehims. Standard appreh	s. Enzymeneters. RNA ic information of the information and degenerate systems. It is relation in the information of the informa	and DNA/RNA. Two carbon units and lized reactions. Enzyme catalyzereaction imples. Enzyme kinetics and kinetic parariar basis of coding and decoding general DNA - genetic material. Hierarchy of ites. Concept of genetic code. Universality on and recombination icrobiology insactions. Thermodynamics to biological sergoinc reactions. Concept of Keq and irrency. Breakdown of glucose to CO2 + 2 and H2O (Photosynthesis). Energy yielded organisms. Concept of species and irroscopy. Ecological aspects of single celling designs (BID for Biomedical and No iopolymers; Bio-optics; Nanostructures in the composition of the composition intelligence algorithms; Bio-optics; Swarm intelligence algorithms; Bio-optics in the composition of 18th Century that lead to magnetic and the control of 18th Century that lead to magnetic intervations in the control intervations of 18th Century that lead to magnetic intervations in the control intervation in the control intervatio	proteins. Nucleotides and DNA/RNA.  itor enzyme catalyzed reactions. Exyme action -two examples. Enzyme kinsfer - The molecular basis of coding information transfer. DNA - genetic the helix to nucleosomes. Concept of genes of complementation and recombinate Metabolism and Microbiology caples of energy transactions. Thermous endergonic and exergoinc reactions ity. ATP - energy currency. Breakdow of glucose from CO2 and H2O (Photost of Energy charge oncept of single celled organisms. Concept of single designs (BID for a chips; Muscular Biopolymers; Bio-official neural networks; Swarm intelligent digital plaster); environmental more rete.  COMES: Skill Development of 18th organisms of 18th organisms of 18th organisms of 18th organisms.	ism of enzyme act tion Transfer - Tar basis of inform to double helix to the ene in terms of correct versus ender Spontaneity. ATP synthesis of glucos. Concept of Enerology Concept of ation of microorgitia compositions. O Bio-inspirion to biologica organs-on-chips; Ims; Artificial nerics (Sensium digitaling concrete.  Describe how biological Describe how biological to the biological organs-on-chips; Ims; Artificial nerics (Sensium digitaling concrete.	mino acio nzymes fechanism formation folecular tranded to ode. Gene fodule IV fetabolism ndotherm nergy. Sp ycle) - syn eactions. ( ficrobiolo lassification d media fodule V ntroduction fuman-org algorithms iagnostics elf healin course U COL I
classification. atalysis. n - universal e- from single acy of genetic  8 Hours tothermic and standard free sis and Krebs gy consuming infication and Sterilization  10 Hours applications): very; Genetic e in medical bio-printing;  45 Hours ALAN, DRINCIPAL	Exother to standard apprehims. Standard appreh	s. Enzymeneters. RNA ic informat DNA structs and degenerate systems. It is relation E2Q (Glycologing and en estrains. Ide ed organism biomedica or Drug De osensors: re-robotics; 3  Total:	and DNA/RNA. Two carbon units and lized reactions. Enzyme catalyzereaction imples. Enzyme kinetics and kinetic parariar basis of coding and decoding general DNA - genetic material. Hierarchy of ites. Concept of genetic code. Universality on and recombination.  icrobiology  insactions. Thermodynamics to biological ergoinc reactions. Concept of Keq and rency. Breakdown of glucose to CO2 + 2 and H2O (Photosynthesis). Energy yielded organisms. Concept of species and roscopy. Ecological aspects of single cellular compositions. The properties of single cellular compositions in telligence algorithms; Biomodical and Notice in the properties of the properties o	proteins. Nucleotides and DNA/RNA.  itor enzyme catalyzed reactions. Exyme action -two examples. Enzyme kinsfer - The molecular basis of coding information transfer. DNA - genetic elebelix to nucleosomes. Concept of genes of complementation and recombinate Metabolism and Microbiology caples of energy transactions. Thermous endergonic and exergoinc reactions ity. ATP - energy currency. Breakdow of glucose from CO2 and H2O (Photost of Energy charge oncept of single celled organisms. Conicroorganisms. Microscopy. Ecologic entropy of single celled organisms. Conicroorganisms. Microscopy. Ecologic entropy of the Engineering phologically-inspired designs (BID for a chips; Muscular Biopolymers; Bio-official neural networks; Swarm intelligent digital plaster); environmental more rete.  COMES: Skill Developmental biopolymers will be the how biological observations of 18th or thiology based on more placed biopolymers.	ism of enzyme act tion Transfer - Tar basis of inform to double helix to the ene in terms of constitution of the ene in terms of glucos. Concept of Enerology Concept of ation of microorgical compositions of the enerology Concept of the enerology Concept of ation of microorgical compositions of the enerology Concept	Amino acidenzymes Mechanism Molecular tranded to ode. Gene Module IV Metabolism mergy. Sp yele) - syn eactions. Of Microbiolo lassification media Module V ntroduction fuman-org Algorithms itagnostics Self healin  COURSE Up
classification. atalysis. n - universal e- from single acy of genetic 8 Hours cothermic and standard free sis and Krebs gy consuming dification and Sterilization 10 Hours applications): e in medical Bio-printing; A5 Hours A Hours	Exother to star obysis al app elivery role in 3D Bio	s. Enzymeneters. RNA ic informat NA struction and degenerate systems. Its relation in the relation of the relation in the rela	and DNA/RNA. Two carbon units and lized reactions. Enzyme catalyzereaction imples. Enzyme kinetics and kinetic parariar basis of coding and decoding general DNA - genetic material. Hierarchy of ites. Concept of genetic code. Universality on and recombination icrobiology insactions. Thermodynamics to biological sergoinc reactions. Concept of Keq and irrency. Breakdown of glucose to CO2 + 2 and H2O (Photosynthesis). Energy yielded organisms. Concept of species and irroscopy. Ecological aspects of single celling designs (BID for Biomedical and No iopolymers; Bio-optics; Nanostructures in the composition of the composition intelligence algorithms; Bio-optics; Swarm intelligence algorithms; Bio-optics in the composition of 18th Century that lead to magnetic and the control of 18th Century that lead to magnetic intervations in the control intervations of 18th Century that lead to magnetic intervations in the control intervation in the control intervatio	proteins. Nucleotides and DNA/RNA.  itor enzyme catalyzed reactions. Exyme action -two examples. Enzyme kinsfer - The molecular basis of coding information transfer. DNA - genetic e helix to nucleosomes. Concept of genes of complementation and recombinate Metabolism and Microbiology caples of energy transactions. Thermous endergonic and exergoinc reactions ity. ATP - energy currency. Breakdown of glucose from CO2 and H2O (Photost of Energy charge molecular of single celled organisms. Comicroorganisms. Microscopy. Ecological microorganisms. Microscopy. Ecological sitions. Growth kinetics  Bio-inspired Engineering prologically-inspired designs (BID for a chips; Muscular Biopolymers; Bio-chips; Muscular Biopolymers; Bio	ism of enzyme act tion Transfer - Tar basis of inform to double helix to the ene in terms of consists principles of microsty. ATP synthesis of glucos. Concept of Enerology Concept of Enerology Concept of ation of microorgia compositions. Or Bio-institution to biologica organs-on-chips; ams; Artificial nerics (Sensium digit ling concrete.  SE OUTCOMES: Upon completion  Describe how biology  Classify biology  Describe the consists of the consis	Amino acidanzymes Mechanism Molecular tranded to ode. Gene Module IV Metabolism mergy. Sp ycle) - syn eactions. Of Microbiolo lassification media Module V ntroduction fuman-org Migorithms inagnostics well healin COURSE  U) CO1   I CO2   C CO3   I CO2   C CO3   I
classification. atalysis. n - universal e- from single acy of genetic  8 Hours tothermic and standard free sis and Krebs gy consuming infication and Sterilization  10 Hours applications): very; Genetic e in medical bio-printing;  45 Hours ALAN, DRINCIPAL	Exother to star obysis al app elivery role in 3D Bio	s. Enzymeneters. RNA ic informat NA struction and degenerate systems. Its relation in the relation of the relation in the rela	and DNA/RNA. Two carbon units and lized reactions. Enzyme catalyzereaction imples. Enzyme kinetics and kinetic parara ar basis of coding and decoding general DNA - genetic material. Hierarchy of ites. Concept of genetic code. Universality on and recombination.  icrobiology  insactions. Thermodynamics to biological xergoinc reactions. Concept of Keq and irrency. Breakdown of glucose to CO2 + 2 and H2O (Photosynthesis). Energy yielded organisms. Concept of species and iroscopy. Ecological aspects of single cellulated organisms. Concept of species and iroscopy. Ecological aspects of single cellulated organisms. Single cellulated organisms. Provided in the control of the control of the cellulated organisms.  Developmental monitoring; Bio-filters; Bio-phological, biochemical and ecological scessiveness and dominance during the control of the cellulated organisms of 18th Century that lead to magnorphological, biochemical and ecological scessiveness and dominance during the cellulated organisms.	proteins. Nucleotides and DNA/RNA.  itor enzyme catalyzed reactions. Exyme action -two examples. Enzyme kinsfer - The molecular basis of coding information transfer. DNA - genetic elebelix to nucleosomes. Concept of genes of complementation and recombinate Metabolism and Microbiology caples of energy transactions. Thermous endergonic and exergoinc reactions ity. ATP - energy currency. Breakdow of glucose from CO2 and H2O (Photost of Energy charge oncept of single celled organisms. Conicroorganisms. Microscopy. Ecologic entropy of single celled organisms. Conicroorganisms. Microscopy. Ecologic entropy of the Engineering phologically-inspired designs (BID for a chips; Muscular Biopolymers; Bio-official neural networks; Swarm intelligent digital plaster); environmental more rete.  COMES: Skill Developmental biopolymers will be the how biological observations of 18th or thiology based on more placed biopolymers.	ism of enzyme act toon Transfer - Tar basis of inform to double helix to the ene in terms of correct too make the ene in terms of correct too make the ene in terms of correct too to the ene in terms of gluco to the ene in terms of gluco to the ene in terms of the en	Amino acid Anzymes Mechanism Information Molecular tranded to ode. Gene Module IV Metabolism Information Motabolism Information Microbiolo lassification Information Module V Introduction Module V In

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	
<ol> <li>ShridharaBhat K Edition 2002.</li> </ol>	, Total (	Quality Management – Text and Cases, Himatsy & P	<b>PANNED</b>	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	
	<ol><li>To Familiarize with different protocols and net simulators</li></ol>	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			
<ol> <li>Implementation Of</li> </ol>	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	
<ol><li>James F.Kurose ar</li></ol>	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
	ONLY THE RESERVE OF THE PARTY O		Nag	apatti	nam (I	Ot) Tar

1902CS452	OPERATING SYSTEMS LABORATORY	L	T	P	C
		0	0	2	1
PREREQU		ST I SUPE	SOUTH .		
	uputer knowledge.				
<ol><li>2.C Program</li></ol>					
COURSE (	OBJECTIVES:				
	<ol> <li>To gain a complete knowledge about UNIX commands.</li> </ol>				
	<ol><li>To obtain an overview of distributed operating systems and the rela</li></ol>				
	process communication models (message passing, remote procedure	e call,	distri	ibuted	
	object computing, and shared memory)				
	<ol> <li>To know the concepts of process management and synchronization</li> </ol>	Dr.			
	<ol> <li>To know the concept of memory management such as best fit, wors</li> </ol>	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' Jude ondi	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) ng 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 RSE OUT	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
Back FUR Inde ond he L	THER RE or MoU with sucted. In the ab session. Writing Queryi Using of RSE OUT	th Oracle Academy, a programme Oracle Workforce Development Program is programme extensive hands-on training on SQL and PL/SQL will be given as the second s	iven t			win
Jack 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 gis SQL queries for Hierarchical retrieval of data (tree structured data) ag Data Dictionary static Views stored procedures and Functions for implementing object level data securit COMES: EMPLOYAND LATY after completion of the course, Student will be able to design and implement a database schema for a given problem-domain breate and maintain tables using various PL/SQL statements	ty	o studi	ents d	aurin,
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 studi	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 gis SQL queries for Hierarchical retrieval of data (tree structured data) ag Data Dictionary static Views stored procedures and Functions for implementing object level data securit COMES: EMPLOYAND LATY after completion of the course, Student will be able to design and implement a database schema for a given problem-domain breate 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				
<ol> <li>To apply related s</li> </ol>		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
<ol> <li>Lo enab</li> </ol>		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
rely on a 5. To App  MODULE I	VOCABI vnonyms and	oles of effective business writing to hone communication	ı skills		6	hours
Tely on a 5. To App  MODULE I  Introduction - Sy and video listenin  MODULE II	VOCABUTOUR ACTIVITY OF THE PROPERTY OF THE PRO	cive voice cles of effective business writing to hone communication ULARY USAGE Antonyms based on Technical terms — Single word S EHENSION ABILITY	ı skills ubstitution -	- News	6 paper,	hour Audio
MODULE I Introduction - Sy and video listenii MODULE II Skimming and S	VOCABI VO	oles of effective business writing to hone communication  ULARY USAGE  Antonyms based on Technical terms — Single word S	ı skills ubstitution -	- News	6 paper,	hour: Audio
MODULE I Introduction - Sy and video listenii MODULE II Skimming and S	VOCABUTOUR TO THE PROPERTY OF	CLARY USAGE Antonyms based on Technical terms — Single word S EHENSION ABILITY Decial Science passages — Business and Economics passa	ı skills ubstitution -	- News	6 paper,	hour: Audio
rely on a 5. To App  MODULE I Introduction - Sy and video listenin MODULE II Skimming and S event based pass MODULE III Parallelism - Re	VOCABLY VOCABL	CLARY USAGE  Antonyms based on Technical terms – Single word S  EHENSION ABILITY  Decial Science passages – Business and Economics passage detection – Deriving conclusion from passages  ERAMMAR AND ERROR DETECTION  Ambiguity – Concord - Common Errors – Spotting En	ubstitution -	- News	6 paper,	hour Audio
rely on a 5. To App  MODULE I Introduction - Sy and video listenii MODULE II Skimming and S event based pass  MODULE III Parallelism - Re Error Detection I	VOCABUTO TO THE PROPERTY OF TH	CLARY USAGE  Antonyms based on Technical terms – Single word S  EHENSION ABILITY  Decial Science passages – Business and Economics passage detection – Deriving conclusion from passages  ERAMMAR AND ERROR DETECTION  Ambiguity – Concord - Common Errors – Spotting Erpetitive exams.	ubstitution -	- News	6 paper, di and comproven	hours Audio
rely on a 5. To App  MODULE I Introduction - Sy and video listenin MODULE II Skimming and S event based pass MODULE III Parallelism - Re Error Detection I MODULE IV	VOCABUTO TO THE PROPERTY OF TH	CLARY USAGE  Antonyms based on Technical terms – Single word S  EHENSION ABILITY  Decial Science passages – Business and Economics passage detection – Deriving conclusion from passages  ERAMMAR AND ERROR DETECTION  Ambiguity – Concord - Common Errors – Spotting Engetitive exams.  ANGEMENT AND GENERAL USAGE	ubstitution - ges – latest rors – Sente	- News	6 paper, di and comproven	hours Audio
rely on a 5. To App  MODULE I Introduction - Sy and video listenin MODULE II Skimming and S event based pass MODULE III Parallelism - Re Error Detection I MODULE IV	VOCABI VO	CLARY USAGE  Antonyms based on Technical terms – Single word S  EHENSION ABILITY  Decial Science passages – Business and Economics passage detection – Deriving conclusion from passages  ERAMMAR AND ERROR DETECTION  Ambiguity – Concord - Common Errors – Spotting Erpetitive exams.	ubstitution - ges – latest rors – Sente	- News	6 paper, 6	hour Audio

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 Madh)

1701MA501	DISCRETE MATHEMATICS	L	T	P	C
		3	2	0	4
COURSE OB				-	
	Develop ability to analyze the mathematical Logic				
	2 Explore the concepts of counting principles and graph theory				
	3 To familiarize the students in understanding algebraic systems as	nd rela	tions		
UNIT I	LOGIC AND PROOFS				Hours
The state of the s	Logic - Propositional equivalences-Predicates and quantifiers-Nested	Quant	ifiers-	Rules	of
	duction to Proofs-Proof Methods and strategy	-	-		
UNIT II	COMBINATORICS			9+3 H	
A THE RESERVE AND A STATE OF THE ASSESSMENT	inductions-Strong induction and well orderingThe basics of counting-Th	No. of the last of		-	-
-Permutations		curre	ace	rela	tions-
generating fur			-	-	
UNIT III	GRAPHS			9+3 E	Mary States and the
	raph moders-Graph terminology and special types of graphs-Represent	ing g	raphs	and	graph
	connectivity-Euler and Hamilton paths		-	5.57	-
UNIT IV	ALGEBRAIC STRUCTURES			PERANA TRADESPERSON	Hours
	ems-Semi groups and monoids Groups Subgroups and homomorphisms-	Coset	s and	Lagra	mge's
THE RESERVE OF THE PERSON NAMED IN	& Fields (Definitions and examples)		1		
THE PERSON NAMED IN COLUMN	LATTICES AND BOOLEAN ALGEBRA			Selvin Helican	Hours
	g-Posets-Lattices as Posets- Properties of lattices-Lattices as Algebraic sys	tems -	-Sub	iattice	- 25
direct product	and Homomorphism-Some Special lattices- Boolean Algebra			1936	
	Total		45	+ 15 F	Hours
FURTHER R	EADING / CONTENT BEYOND SYLLABUS / SEMINAR :				
	1 Modeling Computation and Languages				
	2 Matrix representation of Graphs			700	
COURSE OU	TCOMES: SKILL DEVELOPMENT				DIE
	After completion of the course, Student will be able to			NI VI	TELE?
CO1	Solve problems involving functions, relations and graphs.				
CO2	Analyse combinatorics process such as permutation, combination and u	se the	m in	solvin	g real
	time engineering problems	6.	- 1	- COLUMN	
CO3	Use mathematical notations and coding theory in solving problems in a manner.	system	matic	and h	ogical
CO4	Understand how to use mathematic to address practical operational issues	3			
	Interpret, and analyze scientific ideas in a logical manner.				
References:					
The state of the s	h. P. Grimaldi, "Discrete and Combinatorial Mathematics: An th Edition, Pearson Education Asia, Delhi, (2002).	Appli	ed Int	roduc	tion",
	eth H.Rosen, "Discrete Mathematics and its Applications", Special	India	n odi	tion 7	Cata
McG	raw-Hill Pub. Co. Ltd., New Delhi, (2007).	1491 184	10000	Mary Service	
The second secon	Ibly J.P and Manohar R., "Discrete Mathematical Structures with Applicative", Tata McGraw-Hill Pub. Co. Ltd, New Delhi, 30th Re-print (2007).	ions t	o Cor	nputer	
	nas Koshy, "Discrete Mathematics with Applications", Elsevier Publicatio	ns, (2)	006).	1	
5. Seyn	nour Lipschutz and Mark Lipson, "Discrete Mathematics", Schaum's C Pub. Co. Ltd., New Delhi, Second edition, (2007).		-	ta Mc	Graw-
	ac.in/courses/111105035, www.nptelvideos.in/2012/11/Mathematics.html	ΔΤΙ	ESI	ED	_
7. www	learnersty.com/Free-maths-video lectures - ltv348-pagel.html			1	_
		1		-	et.

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

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

1702CS501	1	DBJECT ORIENTED ANALYSIS AND DESIG	N T	T	I D	-
170203301	-	OBJECT ORIENTED ANALTSIS AND DESIG	N L	T 0	P 0	3
-			3	0	0	3
PREREQUI	SITE ·				1	
TREATER	1. Software E	painaarina				
	Programmi					
COURSEO	BJECTIVES:	ng Concepts				-
COURSE		evelop background knowledge as well as core expe	estiva in abstact a		5	
	Syste		ruse in object o	Tremec		
		ovide the importance of the software design proce	pr	100		
		the basics of OO analysis and design skills the U		T O TO TO		
	J. Dedit	the onsics of OO analysis and design sams the O	MIL design diag	CIRCIES.		-
UNITI	UML DIAGI	PAMS			9 Hot	
		ified Process - UML diagrams - Use Case - Class	Diagrams Inte			
		Diagrams – Package, component and Deployment		TACHOL	Diag	raitis
	DESIGN PA		Diegrams		9 Hot	are
		ogology - Common base class - GRASP: Designi	ng objects with		and the second second	
		ion expert - Low coupling -Controller - High coh				
		ns - Adapter - Singleton - Factory - Strategy - C				
patterns	a design panes	ar rampice surgicion ractor) suricej - c	Joinposite - Fat	were and	a oos	EL FEI
UNIT III	APPLYING	DESIGN PATTERNS			9 Hot	ars
A CONTRACTOR OF THE PARTY OF TH		Relationship between sequence diagrams and us	e cases I naica			A STATE OF THE PARTY OF THE PAR
		ML class diagrams - UML interaction diagrams -				
		ciations - Attributes - Domain model refinem				
		nd Composition.	T. T	come	O'CLEAN .	- m33
UNIT IV	The state of the s	TATION AND APPLICATION		- 1	9 Hot	ars
A CONTRACTOR OF THE PARTY OF TH		- Forward Engineering - Reverse Engineering	- Test driver			
Refactoring	- UML tools	and UML as blueprint - UML state machine of	liagrams and r	nodelii	10 - I	TMT
	and component		militario mai i	The state of the		D. PALLE
	CODING AN			T	9 Hot	ars.
	The state of the s	Testing: Issues in OO Testing - Class Testing -	OO Integratio			
	System Testin				-	
			TOTAL:	4	5 HO	URS
FURTHER	READING/C	ONTENT BEYOND SYLLABUS / SEMINAR :	A STATE OF THE PARTY OF THE PAR			
		Design Patterns.	* 4			. ·
		SRS Documents.	S. William Trans.			- 5
		es: Various tools used in OOAD.				
COURSE O	UTCOMES:	EMPLOYABILITY   ENTREPRENEURS	LIP			18
COCILIE		ion of the course, Student will be able to	TIT			
COl		e documents that capture requirements for a softw	neo cambons			-
CO2		analysis and design diagrams.	are system.		-	
CO3		patterns that facilitate development and evolution	of none models		-	N.
CO4		al world problems by modeling software solutions				- 3
COS	CONTRACTOR OF STREET, CANADA,	contrast various testing techniques.	using OMIL to	DIS.		411
		contrast various testing techniques.				
REFERENC		IDS ID t- L L OV: OV	and a Alman and	275		
		UML and Patterns: An Introduction to Object-Ori	ented Analysis	and De	sign a	nd
		Third Edition, Pearson Education, 2015.	202 777 777 7		9504	
Prentice F	Iall of India Pri	mbaugh, "Object-Oriented Modeling and Design v vate Limited, 2007				
3. Mike O'D	ocherty, "Obje	t-Oriented Analysis & Design: Understanding Sys	stem Developm	ent wit	h UM	L
	Wiley & Sons,					

		THE	ORY O	COMPUT	TATION			L	T	P	C
PREREQUI	CFTE .			A I/II				3	2	0	4
r KEKEQUI	_	Programmina									-
		The same of the sa		- TIT				237			12
COURSE		ngineering M	ameman	CS III					_		
COURSE O											_
		e students to									
		of formal lan	guages a	na grammai	rs; the not	ions of algo	orithm, de	cidabil	ary, co	imple	xity
	and compu	The state of the s		101							
		e/develop stu		ality to unde	erstand an	d conduct i	mathemati	ical pro	ofs fo	T	
		on and algorit					THE R. P.	I MILE			
		to construct I									- 18
		and the notion		idability and	d undecid:	ability of p	roblems, l	Halting	-	-	100
UNITI	THE REAL PROPERTY AND PERSONS ASSESSED.	UTOMATA	Charles Co.					And a second		9+3H	
		hematical No									
		DFA - Finite									
		d DFA – Equ									
Automaton a	und regular e	expressions –	Minimiz	ation of DF	FA Pun	mping Lemi	ma for Re	gular :	sets -	Prob	lem
based on Pur	Real Property and Persons Street										
UNITII	GRAMM	ARS							1	)+3H	our
		Types of G									
		- Relationshi									
Elimination (	of Useless s	ymbols - Uni	it produc								
			er berevenne	tions - Nul	Il producti	ous - Gre	iback No	rmal fo	m -	Chor	125K
normal form.	_ Droblems	related to CN			ll producti	ions – Gre	iback No	rmal fo	m –	Chor	nsky
			Fand (		ll producti	ous – Gre	iback No	nmal fo			
UNIT III	PUSHDO	WN AUTON	E and G	NF.					1	)+3H	our
UNIT III Pushdown A	PUSHDO	WN AUTON	IATA Oves -	NF. nstantaneou	s descript	ions – Dete	erministic	pushd	OWIL 8	0+3H utom	our ata -
UNIT III Pushdown A Equivalence	PUSHDO	WN AUTON	IATA Oves -	NF. nstantaneou	s descript	ions – Dete	erministic	pushd	OWIL 8	0+3H utom	our ata -
UNIT III Pushdown <i>A</i> Equivalence Lemma.	PUSHDO momata- De of Pushdov	WN AUTON	IATA Oves -	NF. nstantaneou	s descript	ions – Dete	erministic	pushd	own a	0+3H utom pum	our ata - pin
UNIT III Pushdown A Equivalence Lemma UNIT IV	PUSHDO momata- De of Pushdow TURING	WN AUTOM THE SUMMERS OF STREET THE SUMMERS OF SUMERS OF SUMMERS OF SUMMERS OF SUMMERS OF SUMERS OF	IATA Oves – I and CF	NF. nstantaneou L - pumpin	s descript ig lemma	ions – Dete for CFL	erministic – probler	pushd ns bas	own a	0+3H utom pum 0+3H	our ata - pini
UNIT III Pushdown A Equivalence Lemma UNIT IV Turing Mach	PUSHDOV momana- De of Pushdov TURING unes- introd	WN AUTON THE TOTAL TO THE TOTAL THE	Fand G IATA oves – 1 and CF mal defin	NF.  Instantaneou  L - pumpin  Inition of Tu	is descript ag lemma uring maci	ions – Dete for CFL hines – Ins	erministic – probler tantaneou	pushdons base	own a ed on	0+3H utom pum 0+3H	our ata - pini our
UNIT III Pushdown A Equivalence Lemma. UNIT IV Turing Mach Machine as	PUSHDO momata- De of Pushdow TURING unes- introd Acceptors -	WN AUTOM TIMELOUS - M TO SUITOM SUITOM SUITOM SUITOM SUITOM SUITOM - FOR TURING MS	Fand G IATA oves – and CF and CF mal defin chine as	NF.  Instantaneou  L - pumpin  Inition of Tu  Transduce	is descript ig lemma uring maci irs Compr	ions – Dete for CFL hines – Ins	erministic – probler tantaneou	pushdons base	own a ed on	0+3H utom pum 0+3H	our ata - ping our
UNIT III Pushdown A Equivalence Lemma. UNIT IV Turing Mach Machine as Machine con	PUSHDO momata- De of Pushdow TURING mnes- Introd Acceptors - structions -	WN AUTON THE	IATA oves - and CF and CF mal defin chine as	NF.  Instantaneou  L - pumpin  Inition of Tu  Transduceing Machine	is descript ig lemma uring maci irs Compr	ions – Dete for CFL hines – Ins	erministic – probler tantaneou	pushdons base	own a ed on gription	0+3H utom pum 0+3H us- To	our ata - ping our uring
UNIT III Pushdown A Equivalence Lemma UNIT IV Turing Mach Machine as Machine con UNIT V	PUSHDOV momana- De of Pushdov TURING unes- Introd Acceptors - structions - COMPUT	WN AUTON WN AUTON WN AUTON WN AUTON WN AUTONAL WN AUTONA WN AUTONA WN AUTONA WN AUTONA WN AUTON	ATA  oves -  and CF  mal defin  chine as  s of Turi	NF.  Instantaneou  L - pumpin  Inition of Tu  Transchice  Ing Machine  EXITY	is descript ag lemma uring maci irs Compu	ions – Dete for CFL nines – Ins stable Lan	erministic – probler tantaneou guages ar	pushdons base us described filmo	own a ed on	0+3H utom: pum 0+3H us- Tr - Tr	our ata- pin our urin urin
UNIT III Pushdown A Equivalence Lemma. UNIT IV Turing Mach Machine as Machine con UNIT V Undecidabili	PUSHDOV momata- De of Pushdov TURING unes- Introd Acceptors - structions - COMPUT ty- Basic d	WN AUTON WN AUTON WN AUTON WN AUTOMATA WN	IATA Oves - and CF and CF mal defin chine as of Turi COMPL Decidable	nstantaneou L - pumpin nition of Tu Transduce ng Machine EXITY	is descript ag lemma uring macl rs Compu	for CFL hines - Instable Lang	erministic  – probler  tantaneou guages ar  - Properti	pushdons base as described fundamental	own a ed on gription tions Recu	0+3H utom pum 0+3H us- Tu - Tu 0+3H rsive	our ata pin our urin urin our an
UNIT III Pushdown A Equivalence Lemma. UNIT IV Turing Mach Machine as Machine con UNIT V Undecidabili Recursively	PUSHDOV unomata- De of Pushdov  TURING unes- Infrod Acceptors - structions - COMPUT ty- Basic denumerable	WN AUTON WN AUTON WN AUTON WN AUTON WN AUTOMATA WN AUTOMATA WN AUTOMATA WN AUTOMATA WN AUTOMATA WORLD WORLD WORLD WORLD WORLD WN AUTOMATA WORLD WN AUTOMATA WORLD WN AUTOMATA	ATA  Oves - 1  and CF  mal defin  chine as  s of Turi  COMPL  Decidable  introduct	nstantaneou L - pumpin nition of Tu Transduceing Machine EXITY e and under	is descript ig lemma uring macl rs Compu	ions – Dete for CFL hines – Ins stable Lang problems –	erministic  – probler  tantaneou guages ar  Properti	pushdons based is described fundamental fu	own a ed on gription tions Recu	0+3H utom pum 0+3H us- Tu - Tu 0+3H rsive	our ping our tring tring
UNIT III Pushdown A Equivalence Lemma. UNIT IV Turing Mach Machine as Machine con UNIT V Undecidabili Recursively	PUSHDOV unomata- De of Pushdov  TURING unes- Infrod Acceptors - structions - COMPUT ty- Basic denumerable	WN AUTON WN AUTON WN AUTON WN AUTOMATA WN	ATA  Oves - 1  and CF  mal defin  chine as  s of Turi  COMPL  Decidable  introduct	nstantaneou L - pumpin nition of Tu Transduceing Machine EXITY e and under	is descript ig lemma uring macl rs Compu	ions – Dete for CFL hines – Ins stable Lang problems –	erministic  – probler  stantaneou guages ar  Properti ity: Defin	pushdons based is described fundamental fu	own a ed on ription tions Recu Fime	0+3H utoms pum 0+3H - Tu 0+3H rsive and S	our: ata- ping our: gring uring our: and
UNIT III Pushdown A Equivalence Lemma. UNIT IV Turing Mach Machine as Machine con UNIT V Undecidabilit Recursively o	PUSHDOV momata- De of Pushdov  TURING unes- Introd Acceptors - structions - COMPUT ty- Basic d enumerable f TMs - con	WN AUTON PRIMITION - NO WN AUTON PRIMITION - NO WN AUTONATA  MACHINE MICTION - FOR AUTONAL OF Languages - 1 Implexity class	IATA  oves – I  and CFI  and CFI  mal defin  chine as  s of Turi  COMPL  Decidable  introduct  es – intro	nstantaneou L - pumpin nition of Tu Transduceing Machine EXITY e and under	us descript ag lemma uring maci rs Compu ss. ecidable p aputational	for CFL hines – Instable Lang problems – Complexitiess and NE	erministic  problem  tantaneou guages ar  Properti ity: Defin	pushdons based is described fundamental fu	own a ed on gription tions Recu	0+3H utoms pum 0+3H - Tu 0+3H rsive and S	our: ata- ping our: gring uring our: and
UNIT III Pushdown A Equivalence Lemma. UNIT IV Turing Mach Machine as Machine con UNIT V Undecidabilit Recursively o	PUSHDOV momata- De of Pushdov  TURING unes- Introd Acceptors - structions - COMPUT ty- Basic d enumerable f TMs - con	WN AUTON WN AUTON WN AUTON WN AUTON WN AUTOMATA WN AUTOMATA WN AUTOMATA WN AUTOMATA WN AUTOMATA WORLD WORLD WORLD WORLD WORLD WN AUTOMATA WORLD WN AUTOMATA WORLD WN AUTOMATA	IATA  oves – I  and CFI  and CFI  mal defin  chine as  s of Turi  COMPL  Decidable  introduct  es – intro	nstantaneou L - pumpin nition of Tu Transduceing Machine EXITY and under	us descript ag lemma uring maci rs Compu ss. ecidable p aputational	for CFL hines – Instable Lang problems – Complexitiess and NE	erministic  problem  tantaneou guages ar  Properti ity: Defin	pushdons based is described fundamental fu	own a ed on ription tions Recu Fime	0+3H utoms pum 0+3H - Tu 0+3H rsive and S	our pin pin our urin our and
UNIT III Pushdown A Equivalence Lemma. UNIT IV Turing Mach Machine as Machine con UNIT V Undecidabilit Recursively o	PUSHDOV momana- De of Pushdov  TURING mes- Introd Acceptors - structions - COMPUI ty- Basic d enumerable f TMs - con	WN AUTON PRIMITION - NO WN AUTON PRIMITION - NO WN AUTONATA  MACHINE MICTION - FOR AUTONAL OF Languages - 1 Implexity class	MATA  TOVES —  TOVES	nstantaneou L - pumpin nition of Tu Transduce ng Machine EXITY e and under ion to Com oduction to I	is descripting lemma uring macing mac	for CFL hines – Instable Lang problems – Complexitiess and NE	erministic  problem  tantaneou guages ar  Properti ity: Defin	pushdons based is described fundamental fu	own a ed on ription tions Recu Fime	0+3H utoms pum 0+3H - Tu 0+3H rsive and S	our pin our urin our and
UNIT III Pushdown A Equivalence Lemma. UNIT IV Turing Mach Machine as Machine con UNIT V Undecidabilit Recursively o	PUSHDOV momata- De of Pushdov  TURING unes- Introd Acceptors - structions - COMPUT ty- Basic d enumerable f TMs - con  READING 1. Interpretations	WN AUTON FINITIONS - NO WN AUTON FINITIONS - NO MACHINE INCTION - FOR TURING Ma Modifications FATIONAL Of lefinitions - D languages - I implexity class  / CONTENT froduction to	MATA  TOVES -  Tand CF  Tand C	nstantaneou L - pumpin Transduce ng Machine EXITY and under ion to Com oduction to I	is descripting lemma uring maches Compuss. ecidable putational NP-Hardu	for CFL hines – Instable Lang problems – Complexitiess and NE	erministic  problem  tantaneou guages ar  Properti ity: Defin	pushdons based is described fundamental fu	own a ed on ription tions Recu Fime	0+3H utoms pum 0+3H - Tu 0+3H rsive and S	our pin pin our urin our and
UNIT III Pushdown A Equivalence Lemma. UNIT IV Turing Mach Machine as Machine con UNIT V Undecidabilit Recursively of complexity of	PUSHDOV momata- De of Pushdov  TURING unes- Introd Acceptors - structions - COMPUT ty- Basic d enumerable f TMs - con  READING  1. Int 2. Ac	WN AUTON PRIMITION OF THE PRIMITION OF T	ATA  oves —  and CF  and CF  and CF  mal defin  chine as  s of Turi  COMPL  Decidable  introduct  es — intro  BEYO  Infinite a  y of con	nstantaneou L - pumpin nition of Tu Transduceing Machine EXITY e and under ion to Compiduction to I	is descripting lemma uring maches Compuss. ecidable putational NP-Hardu	for CFL hines – Instable Lang problems – Complexitiess and NE	erministic  problem  tantaneou guages ar  Properti ity: Defin	pushdons based is described fundamental fu	own a ed on ription tions Recu Fime	0+3H utoms pum 0+3H - Tu 0+3H rsive and S	our pin our urin our and
UNIT III Pushdown A Equivalence Lemma. UNIT IV Turing Mach Machine as Machine con UNIT V Undecidabilit Recursively of complexity of	PUSHDOV momentar De of Pushdov  TURING mes- Infrod Acceptors - structions - COMPUT ty- Basic d enumerable f TMs - con  READING 1. Im 2. Ac  UTCOMES	WN AUTON  MACHINE  MACHINE  MICHINE  MICHINE  MODIFICATIONAL O  Refinitions - D  Refinition - D  Ref	ATA  Oves — I  and CF  and CF  mal defin  chine as  s of Turi  COMPL  Decidable  introduct  es — intro  BEYO  Infinite  y of con  OYABI	nstantaneou L - pumpin nition of Tu Transduceing Machine EXITY e and under ion to Compoduction to I ND SYLLA Automata To putation.	us descript ag lemma uring macl rs Compu- s. ecidable putational NP-Hardu	ions – Dete for CFL hines – Ins stable Lang problems Complexi ess and NE	erministic  problem  tantaneou guages ar  Properti ity: Defin	pushdons based is described fundamental fu	own a ed on ription tions Recu Fime	0+3H utoms pum 0+3H - Tu 0+3H rsive and S	our pin our urin our and
UNIT III Pushdown A Equivalence Lemma UNIT IV Turing Mach Machine as Machine con UNIT V Undecidabilit Recursively of COURSE O	PUSHDOV momana- De of Pushdov  TURING unes- Introd Acceptors - structions - COMPUI ty- Basic d enumerable f TMs - con  READING 1. Int 2. Ac UTCOMES After comp	WN AUTON TIME OF THE PROPERTY	MATA  TOVES —  Tand CF  Tand C	nstantaneou L - pumpin Transduce ng Machine EXITY e and unde tion to Com oduction to I	is descripting lemma uring machers Computers Computers on the computers of	for CFL hines - Instable Languages and NF	erministic  — probler  tantaneou guages ar  Properti ity: Defin	pushdons based six describes of itions-1 teness	own a ed on gription tions  Recurrence: 5 +15	0+3H utoms pum 0+3H ns- Tu - Tu 0+3H rsive and S	our pin our urin our and
UNIT III Pushdown A Equivalence Lemma. UNIT IV Turing Mach Machine as Machine con UNIT V Undecidabilit Recursively of FURTHER COURSE O	PUSHDOV momata- De of Pushdov  TURING unes- Introd Acceptors - structions - COMPUT ty- Basic d enumerable f TMs - con  READING 1. Int 2. Ac UTCOMES After comp	WN AUTON FINITION WN AUTON FINITION WN AUTON WN AUTON WN AUTON MACHINE MICHON - Form Turing Ma Modifications ATIONAL ( lefinitions - D languages - l mplexity class / CONTENT froduction to dvanced theore pletion of the late advanced	MATA  and CF	nstantaneou L - pumpin Transduce ng Machine EXITY and under ion to Com oduction to I  ND SYLLA Automata Traputation.  LITY Student will ge of forma	uring maches Computes.  ecidable puputational NP-Harduble heory	for CFL hines - Instable Language Complexists and NE	erministic  probler  tantaneou guages ar  Properti ity: Defin  Complet  TOTA	pushdons based is described fundamental fu	own a ed on gription tions  Recurrence: 5 +15	0+3H utoms pum 0+3H ns- Tu - Tu 0+3H rsive and S	our pin our urin our an pac
UNIT III Pushdown A Equivalence Lemma. UNIT IV Turing Mach Machine as Machine con UNIT V Undecidabilit Recursively of complexity of FURTHER I	PUSHDOV momana- De of Pushdov  TURING mes- Introd Acceptors - structions - COMPUT ty- Basic d enumerable f TMs - con  READING 1. Int 2. Ac  UTCOMES  After comp Demonstra  Distinguish	WN AUTON PRIMITION AUTON WN AUTON PRIMITION AND AUTON WN	E and CF  IATA  oves — I  and CF  and	nstantaneou L - pumpin Transduceing Machine EXITY and under ion to Computation to I  ND SYLLA Automata Traputation.  LITY Student will ge of forma languages a	uring macing computes.  BUS / SE heory  be able to a classification and classification.	tions – Determines – Instable Language or Complexis ess and NE	erministic  probler  tantaneou guages ar  Properti ity: Defin  Complet  TOTA	pushdons based is described fundamental fu	own a ed on gription tions  Recurrence: 5 +15	0+3H utoms pum 0+3H ns- Tu - Tu 0+3H rsive and S	our pin our urin our and
UNIT III Pushdown A Equivalence Lemma. UNIT IV Turing Mach Machine as Machine con UNIT V Undecidabilit Recursively of complexity of FURTHER I	PUSHDOV momana- De of Pushdov  TURING mes- Infrod Acceptors - structions - COMPUT ty- Basic d enumerable f TMs - con  READING  1. Infr 2. Ac  UTCOMES  After comp Demonstra  Distinguish Recognize	WN AUTON AUT	E and C  IATA  oves — I  and CFI  and C	nstantaneou L - pumpin Transduceing Machine EXITY e and under ion to Compoduction to I  ND SYLLA Automata Transducein Exity Student will ge of formal languages a nal reasonin	is descript ig lemma uring maci rs Compu- s. ecidable putational NP-Hardu ABUS / SE heory be able to l computa and classif- ig about la	for CFL hines – Instable Lang problems – Complexions and NI MINAR:	erministic  problem  tantaneou guages ar  Properti ty: Defin  Complete  TOTA	pushdons based is described fundamental fu	own a ed on griptions tions Recurrent firme :	0+3H utom pum 0+3H is- To - To 0+3H rsive and S	our pin our urin our an pac
UNIT III Pushdown A Equivalence Lemma. UNIT IV Turing Mach Machine as Machine con UNIT V Undecidabilit Recursively of complexity of FURTHER I	PUSHDOV momana- De of Pushdov  TURING unes- Introd Acceptors - structions - COMPUT ty- Basic d enumerable f TMs - con  READING  1. Im 2. Ac  UTCOMES After comp Demonstra Distinguish Recognize Show a con	WN AUTON PRIMITION AUTON WN AUTON PRIMITION AND AUTON WN	ATA  and CF  a	nstantaneou L - pumpin Transduce ng Machine EXITY and under ion to Com oduction to l  ND SYLLA Automata Tr putation.  LITY Student will ge of forma languages a nal reasoning of the basis	uring macing computational NP-Hardus be able to describe to describe to describe to describe about later concepts about later concepts and classifications.	for CFL hines – Instable Lang problems – Complexions and NI MINAR:	erministic  problem  tantaneou guages ar  Properti ty: Defin  Complete  TOTA	pushdons based is described fundamental fu	own a ed on griptions tions Recurrent firme :	0+3H utom pum 0+3H is- To - To 0+3H rsive and S	our pin our urin our an pac

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

			-			
1702CS503	COMPUTER GRAPHICS A	ND MULTIMEDIA	L	T	P	C
			3	0	0	3
PREREQUI						
	1.Programming in C					
	2.Programming Paradigms					
	<ol><li>Design and analysis of Algorithms</li></ol>					
COURSE OF	Control Contro					. 13
	To know the Basic devices of graphics					
	<ol><li>To know the algorithm for displaying two</li></ol>	dimensional output pr	unifives :	for ras	ter	
	graphics system					-
	<ol><li>To know the basic concepts of how to rep</li></ol>					-
	<ol> <li>To know the basic concepts of multimedi</li> </ol>	a and advanced multim	edia syst	em co	ncept	S
VINCEN V	DACTO OF COLUMNIES OF A PRINCE			-		
UNITI	BASIC OF COMPUTER GRAPHICS			1.5		ours
	puter Graphics, Applications of computer graphi		andom a	and R	aster	scan
	hics input devices, Graphics software and standard	5			6 ***	- 3
UNIT II	GRAPHICS PRIMITIVES	-1	900			ours
	circles and ellipses as primitives, scan conversion					
The second secon	n-line polygon filling, inside-outside test, bound	many and mood-nii, cr	aracter	genera	inon,	me
UNIT III	a-fill attributes, character attributers.  2D TRANSFORMATION AND VIEWING			1	10 H	
Control of the Contro	us (translation, rotation, scaling), matrix represe	manian banananan				
	us (transfation, rotation, scaning), matrix represents, reflection and shearing, viewing pipeline					
	s, renection and salesting, viewing pipeline is, clipping including point clipping, line clipping (					
	r models: properties of light, XYZ, RGB, YIQ and		- oerany,	242.24	l' hor	Enn
UNIT IV	3D CONCEPTS, TRANSFORMATION AND			1	10 H	white
THE STATE OF THE S	emous, porygon surraces, taores, equanons, mesh		rfaces or	madric		
	entation, cubic spline interpolation methods, Baz					
	scaling, rotation and translation, composite tran-					
	erspective transformation		*			
UNITV	MULTIMEDIA		A CARLON		9 H	ours
The local management of the last of the la	Multimedia: Concepts, uses of multimedia, hypo	ertext and hypermedia:	Image, v	video	-	100000
	dio: digital audio, MIDI, processing sound, samp					
standards, co	mpression through spatial and temporal redunda	ncy, inter-frame and	intrafran	ne con	mores	ion
	pes, techniques, key frame animation, utility, morp				*	
Annual Control			Total:		45 H	ours
FURTHER I	EADING / CONTENT BEYOND SYLLABUS				1	
	Visible surface detection concepts		de la la			
	<ol><li>Back-face detection, depth buffer method</li></ol>	, illumination, light sor	rces, illu	uninat	ion	
	methods					
COURSE OF	TCOMES: EMPLOYABILITY			H 2		
	After completion of the course, Student will be ab	le to				
COl	To understand the various computer graphics hard	hware and display techn	ologies			
CO2	2D and 3D viewing technologies				BA	
CO3	Various 2D and 3D objects transformation technic	pues				
CO4	To understand the multimedia concepts for anima		Mark I			
CO5	Design and implement computer animation with n	CONTRACTOR OF THE PARTY OF THE		THE P		
References:						
	outer Graphics, D Hearn And P Baker - Pearson Ed	action - C Version	AT	TEST	ED	
	outer Graphics, with OpenGL Hearn and Baker, - P		AI	1	1	7
	outer Graphics, Sinha & Udai, - TMH	Maria de la companya del companya de la companya de la companya del companya de la companya de l	6	1/9	7	
The second secon	outer Graphics, Salma & Odai, - 11viri outer Graphics, Foley and van Dam - Person Educa	tion Dr. S	RAMA	BAL	AN,	M.E.,
4. Com	nuer Graphics, Forey and van Dam - Person Edika	HOLL DI.	PR	HNCH	AL	

1703CS002		SOFTWARE TESTING	L	T	P	C
			3	0	0	. 3
DEPENTE	LITE .	Cofeesa Fundamento				
PREREQUIS COURSE	IIE	Software Engineering	1			
OBJECTIVE:	S:					
	1.To	study the various test design strategies.				
	2. To	o understand the levels of testing and defect classes.				
	3. To	o learn the testing and debugging policies .		THE O		
	4. To	o study about quality assurance plan.				
UNIT I	INT	RODUCTION			9 H	Iour
Introduction	mo hans	International Control of the Control	1/1/2	50		
approach – De	velopm	amentals- Minimizing Risks – Writing a policy – Building a structuring a test strategy – Building the software testing process – Software tware testing process.		guide	lines -	
UNIT II	ORO	GANIZATION AND DEVELOPMENT OF TESTING APPROA	CH		9 H	Lour
software projec Inspect Test Pl	rt – Un an	vare testing process – Organizing for testing – Developing Test plan derstand project risk – Testing technique – Unit testing and analysis	- Prof - Buil	ile the ld and		
UNIT III		RIFICATION AND VALIDATION  - Kequirement phase Testing — Design phase testing — Programming			-	Lour
	s - Re	Design and Programming Phase – Guidelines – Validation Testing – ) cord Test Results. **LEMENTATION**	Build	test dar		
			-	8	УH	lour
			IN VIOLET			
Preoperational	Testin;	nd Operational Testing – Acceptance Testing – Define, Develop and g – Test and Monitor – Post-Operational Testing – Develop and Test ysis – Workbenches – Procedures.	t – Pos	t t		
Preoperational Implementation UNIT V	Testin; n Anal SOF	g - Test and Monitor - Post-Operational Testing - Develop and Test ysis - Workbenches - Procedures. TWARE QUALITY CONSIDERATIONS	t – Pos	t	-	
Preoperational Implementation UNIT V Quality manage Guidelines- Ba	Testing Analy SOF ements sic insp	g — Test and Monitor — Post-Operational Testing — Develop and Test ysis — Workbenches — Procedures.	- Pos blishin chang	ig stan	dards defec	-
Preoperational Implementation UNIT V Quality manage Guidelines- Ba Prevention -De	Testing Analy SOF ement sic insperience pr	g — Test and Monitor — Post-Operational Testing — Develop and Test ysis — Workbenches — Procedures.  TWARE QUALITY CONSIDERATIONS  — Quanty assurance pran- SCM support functions- SCM Tools- Esta pection principles- Principles of software defect prevention- Process	t – Pos blishin	ig stan	dards	-
Preoperational Implementation UNIT V Quality manage Guidelines- Ba Prevention -De	Testing Analy SOF ement sic insperience pr	g - Test and Monitor - Post-Operational Testing - Develop and Test ysis - Workbenches - Procedures.  TWARE QUALITY CONSIDERATIONS  - Quanty assurance pun-SCM support functions-SCM Tools-Estal pection principles- Principles of software defect prevention- Process revention considerations.	- Pos blishin chang	ig stan	dards defec	- t
Preoperational Implementation UNIT V Quality manage Guidelines- Ba Prevention -De	Testin, n Analy SOF ennem ssic insperience pri	g - Test and Monitor - Post-Operational Testing - Develop and Test ysis - Workbenches - Procedures.  TWARE QUALITY CONSIDERATIONS  - Quanty assurance pran- SCM support functions- SCM Tools- Esta pection principles- Principles of software defect prevention- Process revention considerations.  1. The SEI process capability maturity model	- Pos blishin chang	ig stan	dards defec	-
Preoperational Implementation UNIT V Quality manage Guidelines- Ba Prevention -De Further Readi	Testin, n Analy SOF ement sic inspefect pr	g – Test and Monitor – Post-Operational Testing – Develop and Test ysis – Workbenches – Procedures.  TWARE QUALITY CONSIDERATIONS  – Quanty assurance pran- SCM support functions- SCM Tools- Esta pection principles- Principles of software defect prevention- Process revention considerations.  1. The SEI process capability maturity model 2. Reliability measures	- Pos blishin chang	ig stan	dards defec	-
Preoperational Implementation UNIT V Quality manage Guidelines- Ba Prevention -De Further Readi	Testin, n Analy SOF ennem ssic insperient preferring	g - Test and Monitor - Post-Operational Testing - Develop and Test ysis - Workbenches - Procedures.  TWARE QUALITY CONSIDERATIONS  - Quanty assurance pranth SCM support functions - SCM Tools - Esta pection principles - Principles of software defect prevention - Process revention considerations.  1. The SEI process capability maturity model 2. Reliability measures  TES: EMPROYA BUTY ENTREPRENEUR (HIP	- Pos blishin chang	ig stan	dards defec	-
Preoperational Implementation UNIT V Quality manage Guidelines- Ba	Testin, n Analy SOF ennemissic insperient pro- ing:  ICOM After	g - Test and Monitor - Post-Operational Testing - Develop and Test ysis - Workbenches - Procedures.  TWARE QUALITY CONSIDERATIONS  - Quanty assurance pran- SCM support functions- SCM Tools- Esta pection principles- Principles of software defect prevention- Process revention considerations.  1. The SEI process capability maturity model 2. Reliability measures  IES: ENPROPERINGUELTY ENTREPRENGUELTY  Trompletion of the course, Student will be able to	t – Pos blishin chang Total	ig stames for	dards defect 45 H	t
Preoperational Implementation UNIT V Quality manage Guidelines- Ba Prevention -De Further Readi	Testin, n Analy SOF ennem ssic insperient pr ing: ICOM After Use	g — Test and Monitor — Post-Operational Testing — Develop and Test ysis — Workbenches — Procedures.  TWARE QUALITY CONSIDERATIONS  — Quanty assurance pranth SCM support functions - SCM Tools - Esta pection principles - Principles of software defect prevention - Process revention considerations.  1. The SEI process capability maturity model 2. Reliability measures  TES: EMPWYA BUTY ENTREPRIMEDRICHIP I completion of the course, Student will be able to modern software testing processes in relation to software developms	t – Pos blishin chang Total	ig stames for	dards defect 45 H	-
Preoperational Implementation UNIT V Quality manage Guidelines- Ba Prevention -De Further Readi	Testin, n Analy SOF ennem ssic inspefect pr ing: ICOM After Use mans	g - Test and Monitor - Post-Operational Testing - Develop and Test yesis - Workbenches - Procedures.  TWARE QUALITY CONSIDERATIONS  - Quanty assurance plan- SCM support functions- SCM Tools- Esta pection principles- Principles of software defect prevention- Process revention considerations.  1. The SEI process capability maturity model  2. Reliability measures  TES: Engraya Burry Engree Concerns to software developms agement.	t – Pos blishin chang Total	ig stames for	dards defect 45 H	- t
Preoperational Implementation UNIT V Quality manage Guidelines- Ba Prevention -De Further Readi COURSE OU CO1	Testin, a Analy SOF ement sic insperient properties ing:  ICOM After Use mans Creat Identification	g — Test and Monitor — Post-Operational Testing — Develop and Test years — Workbenches — Procedures.  TWARE QUALITY CONSIDERATIONS  — Quanty assurance plan- SCM support functions- SCM Tools- Esta pection principles- Principles of software defect prevention- Process revention considerations.  1. The SEI process capability maturity model  2. Reliability measures  IES: ENPRINCIPLE CONCUMP  I completion of the course, Student will be able to modern software testing processes in relation to software developm agement.  Ite test strategies and plans, design test cases, prioritize and execute to tify suitable tests to be carried out. Conduct various types and levels	t - Pos blishin chang Total ent and	g stames for	dards defect 45 H	lour
Preoperational Implementation UNIT V Quality manage Guidelines- Ba Prevention -De Further Readi COURSE OU CO1 CO2 CO3	Testin, n Analy SOF ement sic insperient pr ing:  ICOM After Use man: Creat Ident a sof	g — Test and Monitor — Post-Operational Testing — Develop and Test yesis — Workbenches — Procedures.  TWARE QUALITY CONSIDERATIONS  — Quanty assurance prans SCM support functions SCM Tools — Esta pection principles - Principles of software defect prevention - Process revention considerations.  1. The SEI process capability maturity model  2. Reliability measures  TES: EMPWYA BULTY ENTREPRENCORLED Per completion of the course, Student will be able to modern software testing processes in relation to software developm agement.  Ite test strategies and plans, design test cases, prioritize and execute this suitable tests to be carried out. Conduct various types and levels tware project	t - Pos blishin chang Total ent and	g stames for	dards defect 45 H	lour
Preoperational Implementation UNIT V Quality manage Guidelines- Ba Prevention -De Further Readi COURSE OU CO1 CO2 CO3	Testin, n Analy SOF etnemi sac inspector proming: TCOM After Use man: Creat Ident a soft Expector	g — Test and Monitor — Post-Operational Testing — Develop and Test yests — Workbenches — Procedures.  TWARE QUALITY CONSIDERATIONS  — Quanty assurance prant SCM support functions - SCM Tools - Esta pection principles - Principles of software defect prevention - Process revention considerations.  1. The SEI process capability maturity model  2. Reliability measures  TES: EMPOYA BULTY ENTREPRINCORCHIP  Troompletion of the course, Student will be able to modern software testing processes in relation to software developm agement.  Ite test strategies and plans, design test cases, prioritize and execute this suitable tests to be carried out. Conduct various types and levels thware project eximent with various test processes for quality improvement.	t - Pos blishin chang Total ent and	ag stames for	dards defect 45 H	lour
Preoperational Implementation UNIT V Quality manage Guidelines - Ba Prevention - De Further Readi COURSE OU CO1 CO2 CO3	Testin, n Analy SOF etnemi sac inspector proming: TCOM After Use man: Creat Ident a soft Expector	g — Test and Monitor — Post-Operational Testing — Develop and Test yesis — Workbenches — Procedures.  TWARE QUALITY CONSIDERATIONS  — Quanty assurance prans SCM support functions SCM Tools — Esta pection principles - Principles of software defect prevention - Process revention considerations.  1. The SEI process capability maturity model  2. Reliability measures  TES: EMPWYA BULTY ENTREPRENCORLED Per completion of the course, Student will be able to modern software testing processes in relation to software developm agement.  Ite test strategies and plans, design test cases, prioritize and execute this suitable tests to be carried out. Conduct various types and levels tware project	t - Pos blishin chang Total ent and	ag stames for	dards defect 45 H	lour
Preoperational Implementation UNIT V Quality manage Guidelines- Ba Prevention -De Further Readi COURSE OU CO1 CO2 CO3 CO4 CO5 References:	Testin, a Analy SOF ement sic insperient prices ing:  TCOM After Use man: Crea Ident a sof Experient	TWARE QUALITY CONSIDERATIONS  — Quanty assurance plan- SCM support functions- SCM Tools- Esta pection principles- Principles of software defect prevention- Process revention considerations.  1. The SEI process capability maturity model  2. Reliability measures  IES: EMPROPABILITY ENTROPED CHAP  I completion of the course, Student will be able to modern software testing processes in relation to software developm agement.  Ite test strategies and plans, design test cases, prioritize and execute this suitable tests to be carried out. Conduct various types and levels tware project eniment with various test processes for quality improvement, tify the software standards for a software project and manage the test.	t - Pos blishin chang Total ent and hem. of sof	ig stames for the desired projections in the desired projection in the	dards defect 45 H	lour
Preoperational Implementation UNIT V Quality manage Guidelines- Ba Prevention -De Further Readi COURSE OU CO1 CO2 CO3 CO4 CO5 References: 1. Willian	Testin, Analysis Analysis Analysis Analysis After Use mans Identification a soft Experiment E Periment E Perim	g — Test and Monitor — Post-Operational Testing — Develop and Test visis — Workbenches — Procedures.  TWARE QUALITY CONSIDERATIONS — Quanty assurance prantor SCM support functions — SCM Tools — Esta pection principles - Principles of software defect prevention — Process revention considerations.  1. The SEI process capability maturity model 2. Reliability measures  TES: Engraya Burry Conservator United Part of the Completion of the course, Student will be able to modern software testing processes in relation to software developm agement.  Ite test strategies and plans, design test cases, prioritize and execute this suitable tests to be carried out. Conduct various types and levels the software standards for a software project and manage the test arry, Effective Methods for Software Testing, John Wiley & Sons, US	t - Pos blishin chang Total ent and hem. of sof	ig stames for the desired projections in the desired projection in the	dards defect 45 H	lour
Preoperational Implementation UNIT V Quality manage Guidelines- Ba Prevention -De Further Readi COURSE OU CO1 CO2 CO3 CO4 CO5 References: 1. William 2. Watts	Testin, a Analy SOF etnemicsic insperient properties ing: ICOM After Use mans Crea Ident a soft Exper Ident Tident S. Hum	g — Test and Monitor — Post-Operational Testing — Develop and Test visis — Workbenches — Procedures.  TWARE QUALITY CONSIDERATIONS — Quanty assurance prant SCM support functions SCM Tools — Esta pection principles - Principles of software defect prevention - Process revention considerations.  1. The SEI process capability maturity model 2. Reliability measures  TES: EMPLOYA BLATY ENDREPRINGOR CHIP is completion of the course, Student will be able to modern software testing processes in relation to software developm agement.  Ite test strategies and plans, design test cases, prioritize and execute this suitable tests to be carried out. Conduct various types and levels the suitable tests to be carried out. Conduct various types and levels the software project eniment with various test processes for quality improvement, this the software standards for a software project and manage the test ary, Effective Methods for Software Testing, John Wiley & Sons, US uphrey, Managing the software process, Addison Wesley, 201	t - Pos blishin chang Total ent and hem. of sof	ig stames for the desired projections in the desired projection in the	dards defect 45 H	lour
Preoperational Implementation UNIT V Quality manage Guidelines- Ba Prevention - De Further Readi COURSE OU CO1 CO2 CO3 CO4 CO5 References: 1. William 2. Watts 3. Ian So	Testin, a Analy SOF ement sic insperient properties ing:  TCOM After Use mans Crea Ident a sof Exper Ident mervill	g — Test and Monitor — Post-Operational Testing — Develop and Test yesis — Workbenches — Procedures.  TWARE QUALITY CONSIDERATIONS  — Quanty assurance prant SCM support functions — SCM Tools — Esta pection principles - Principles of software defect prevention — Process revention considerations.  1. The SEI process capability maturity model 2. Reliability measures  TES: ENPROPABILITY ENTROPE NEOR CHIP  Trompletion of the course, Student will be able to modern software testing processes in relation to software developm agement.  The test strategies and plans, design test cases, prioritize and execute to tify suitable tests to be carried out. Conduct various types and levels the software project eriment with various test processes for quality improvement.  The SEI process capability maturity model  2. Reliability measures  TES: ENPROPART CHIP  Trompletion of the course, Student will be able to modern software testing processes in relation to software developm agement.  The SEI process capability maturity model  Testing to the course, Student will be able to modern software testing processes for quality improvement.  The SEI process capability maturity model  Testing to the course, Student various types and levels the test strategies and plans, design test cases, prioritize and execute to the software project  The SEI process capability maturity model  The SEI process capability mat	t - Pos blishin chang Total ent and hem. of sof	ig stames for the desired projections in the desired projection in the	dards defect 45 H	lour
Preoperational Implementation UNIT V Quality manage Guidelines- Ba Prevention -De Further Readi COURSE OU CO1 CO2 CO3 CO4 CO5 References: 1. Willian 2. Watts 3. Ian So 4. Steve I 5. Richar	Testing Analysis Analysis Analysis Analysis Analysis After Use mans Identification After Identification Experience Identification Ident	g — Test and Monitor — Post-Operational Testing — Develop and Test visis — Workbenches — Procedures.  TWARE QUALITY CONSIDERATIONS — Quanty assurance prant SCM support functions SCM Tools — Esta pection principles - Principles of software defect prevention - Process revention considerations.  1. The SEI process capability maturity model 2. Reliability measures  TES: EMPLOYA BLATY ENDREPRINGOR CHIP is completion of the course, Student will be able to modern software testing processes in relation to software developm agement.  Ite test strategies and plans, design test cases, prioritize and execute this suitable tests to be carried out. Conduct various types and levels the suitable tests to be carried out. Conduct various types and levels the software project eniment with various test processes for quality improvement, this the software standards for a software project and manage the test ary, Effective Methods for Software Testing, John Wiley & Sons, US uphrey, Managing the software process, Addison Wesley, 201	t - Pos blishin chang Total ent and hem. of sof	ig stames for the desired projections in the desired projection in the	dards defect 45 H	t dour

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

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

1703CS006			MOBILE	COMPUTIN	G	L	T	P	C
						3	0	0	3
PERFORM									
PREREQUI		Computer Ne	twoeks		0.00				
OURSE O	BJECTIVES			-forebile and		T		£	
		the component Windows OS			scanon deve	чориван пап	EWOL	KS LOI	
	Contract of the latest and the lates	how to work wi			damalanma	at framamork			
		niliar with the o					2.		
UNIT I	A STATE OF THE PARTY OF THE PAR	W and GSM A			manual de va			9 TJ	ours
		Computing A	MATERIAL PROPERTY AND ADDRESS OF THE PARTY AND	THE REAL PROPERTY AND ADDRESS OF THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NAMED IN COLUMN	Vinhila Svete	an Matanaire		оп	OULS
GSM and O	ther 2G Arch	itectures: GSM ity, New Data	A, Radio Interfa	aces of GSM, I	rotocols of			, Call	
UNIT II	WIDEI ES	S MEDIUM A	CCESS CON	TROL CDM	3C		-	0 11	ours
OMIT II		OMMUNICAT		LICE, CDM	4 30,			3 m	out 2
Multipleving	The state of the s	ne Meanin Ac		evimounings.	uesto Spiech	um Coding V	Jethn	ds C	nde
		IMT -2000 3G							
		Long-term Ev							
UNIT III		PNETWORK			STATE OF THE PARTY			9 H	ours
	LAYER								
Mobile IP No	erwork Layer.	IP and Mobile	IP Network La	yer, Packet De	livery and E	landover Mai	nagem	ent,	
		A STATE OF THE PARTY OF THE PAR					-		
Location Mai	nagement, Re	gistration, Tune	eling and Enca	psulation, Rou	ite Optimiza	tion, Dynami	ic Hos	I	
Configuration	n Protocol. M	gistration, Tuni	Layer. Conver	tional TCP/IP	Transport L	ayer Protoco	ls, Ind	irect	
Configuration	n Protocol. Mi ng TCP, Mob orks.	gistration, Tun obile Transport ile TCP, Other	Layer: Conver Methods for M	ntional TCP/IP obile TCP -lay	Transport L	ayer Protoco	ls, Ind	irect	
Configuration TCP, Snoopi	n Protocol. Mi ng TCP, Mob orks.	gistration, Tuni obile Transport	Layer: Conver Methods for M	ntional TCP/IP obile TCP -lay	Transport L	ayer Protoco	ls, Ind	irect G/3G	ours
Configuration TCP, Snoopi Mobile Netw	n Protocol. Ming TCP, Mob orks.  DATABAS	gistration, Tun obile Transport ile TCP, Other	Layer: Conver Methods for M A DISSEMINA	ntional TCP/IP obile TCP -lay	Transport L	ayer Protoco	ls, Ind	irect G/3G	
Configuration TCP, Snoopi Mobile Netw UNIT IV  Databases: 1 Transaction 1 Disseminatio	n Protocol. Ming TCP, Mobiorks.  DATABAS BROADCA  Database Hoto Models, Quer n and Broad	gistration, Tum obile Transport ile TCP, Other	Layer: Conver Methods for M A DISSEMINA EMS ques, Data Con Data Recovery ms: Communications	aching, Chen Process, Issuication Asym	Transport L ver Transmis t- Server ( es Relating metry, Class	ayer Protoco ssion, TCP or Computing a to Quality C sification or	ls, Ind ver 2.5 and A of Ser	8 H	ours tion,
Configuration TCP, Snoopi Mobile Netw UNIT IV  Databases: I Transaction 1 Dissemination Mechanisms,	n Protocol. Ming TCP, Mobiorks.  DATABAS BROADCA  Database Hormodels, Quern and Broad, Data Dissem  MOBILE S	gistration, Turn obile Transport ile TCP, Other  ESAND DATA STING SYST  arding Technic y Processing, I deasting Syste	Layer: Conver Methods for M A DISSEMINA EMS ques, Data Con Data Recovery ms: Communicat Models, Sel	aching, Chen Process, Issuication Asym ective Tuning	Transport L ver Transmis t- Server ( es Relating metry, Class and Indexing	ayer Protoco ssion, TCP or Computing a to Quality C sification or	ls, Ind ver 2.5 and A of Ser	8 H	ours tion, Data ivery
Configuration TCP, Snoopi Mobile Netw UNIT IV  Databases: I Transaction Disseminatio Mechanisms, UNIT V	n Protocol. Ming TCP, Mobiorks.  DATABAS BROADCA  Database Hose Models, Quer n and Broad Data Dissem  MOBILE S DEVICES	gistration, Tum bobile Transport ile TCP, Other  ESAND DATA STING SYST  arding Technic y Processing, I leasting Syste ination Broader  YNCHRONIA	Layer: Conver Methods for M A DISSEMINA EMS ques, Data Ca Data Recovery ms: Communicat Models, Sel-	aching, Chen Process, Issuication Asym ective Tuning MOBILE	Transport L ver Transmis t- Server ( es Relating metry, Clas	ayer Protoco ssion, TCP or Computing a to Quality C sification of g Techniques	ls, Ind ver 2.5 and A Of Ser f Dat	8 H dapta vice. a-Deli	ours tion, Data very
Configuration TCP, Snoopi Mobile Netw UNIT IV  Databases: 1 Transaction 1 Dissemination Mechanisms, UNIT V  Mobile Sync	n Protocol. Ming TCP, Mobiorks.  DATABAS BROADCA  Database Horizontal Models, Quern and Broad, Data Dissem  MOBILES DEVICES	gistration, Turn bobile Transport ile TCP, Other  ESAND DATA STING SYST  arding Technic y Processing, I deasting Syste ination Broades	Layer: Conver Methods for M A DISSEMINA EMS ques, Data Ca Data Recovery ms: Communicast Models, Sel- MATION AND	aching, Chen Process, Issuication Asymmetrive Tuning MOBILE Syncaronization	Transport L ver Transmis t- Server ( es Relating metry, Class and Indexing	ayer Protoco ssion, TCP or Computing a to Quality C sification or g Techniques	ls, Ind ver 2.5 and A of Ser f Dat	8 H adapta vice. a-Deli	ours tion, Data ivery
Configuration TCP, Snoopi Mobile Netw UNIT IV  Databases: I Transaction 1 Dissemination Mechanisms, UNIT V  Mobile Synci Devices, Sy	n Protocol. Ming TCP, Mobiorks.  DATABAS BROADCA  Database Hormonian Broad, Data Dissem  MOBILES DEVICES Bronization	gistration, Tum bobile Transport ile TCP, Other  ESAND DAT STING SYST  arding Technic y Processing, I deasting Syste ination Broades  YNCHRONI  Moonie Comp	Layer: Conver Methods for M A DISSEMINA EMS ques, Data Ca Data Recovery ms: Communi ast Models, Sel- Mation And uning systems. ync- Synchros	aching, Client Process, Issuication Asymmetrive Tuning  MOBILE  Synchronization Languages	t- Server (es Relating metry, Classand Indexing	Computing a to Quality Confication of g Techniques	ls, Indier 2.5  and A  of Ser  f Dat  ware:  puting	8 H adapta vice. a-Deli for M g, Sy	ours tion Data very ours obile
Configuration TCP, Snoopi Mobile Netw UNIT IV  Databases: I Transaction 1 Dissemination Mechanisms, UNIT V  Mobile Sync. Synchronized	n Protocol. Ming TCP, Mobiorks.  DATABAS BROADCA  Database Hos Models, Quern and Broad, Data Dissem  MOBILE S DEVICES Promisation in Inchronization in Multimedia	gistration, Turn bobile Transport ile TCP, Other  ESAND DATA STING SYST  arding Technic y Processing, I deasting Syste ination Broades  YNCHRONI  Moone Comp Protocols, S	Layer: Conver Methods for M A DISSEMINA EMS ques, Data Ca Data Recovery ms: Communi ast Models, Sel MATION AND uning systems. ync- Synchron age (SMIL). M	aching, Chen Process, Issu ication Asym ective Tuning  MOBILE Synchronization Lang tobile Devices:	t- Server (es Relating metry, Classand Indexing on, Synchro uage for I Server and	Computing a to Quality Confication of g Techniques	ls, Indier 2.5  and A  of Ser  f Dat  ware:  puting	8 H adapta vice. a-Deli for M g, Sy	ours tion Data very ours obile
Configuration TCP, Snoopi Mobile Netw UNIT IV  Databases: I Transaction Dissemination Mechanisms, UNIT V  Mobile Synci Devices, Sy Synchronized Application S	n Protocol. Ming TCP, Mobiorks.  DATABAS BROADCA  Database Hos Models, Quern and Broad, Data Dissem  MOBILE S DEVICES Promisation in Inchronization in Multimedia	gistration, Tum bobile Transport ile TCP, Other  ESAND DATA STING SYST  arding Technic y Processing, I deasting Syste ination Broades  YNCHRONI  Mootie Comp Protocols, S Markup Languays, Portals, Se	Layer: Conver Methods for M A DISSEMINA EMS ques, Data Ca Data Recovery ms: Communi ast Models, Sel MATION AND uning systems. ync- Synchron age (SMIL). M	aching, Chen Process, Issu ication Asym ective Tuning  MOBILE Synchronization Lang tobile Devices:	t- Server (es Relating metry, Classand Indexing on, Synchro uage for I Server and	Computing a to Quality Confication of g Techniques	ls, Indier 2.5  and A  of Ser  f Dat  ware:  puting	8 H adapta vice. a-Deli for M g, Sy	ours tion Data very ours obile
Configuration TCP, Snoopi Mobile Netw UNIT IV  Databases: I Transaction Dissemination Mechanisms, UNIT V  Mobile Synci Devices, Sy Synchronized Application S	n Protocol. Ming TCP, Mobiorks.  DATABAS BROADCA  Database Hormonication in Mobile S DEVICES Information in Models Server, Gatew	gistration, Tum bobile Transport ile TCP, Other  ESAND DATA STING SYST  arding Technic y Processing, I deasting Syste ination Broades  YNCHRONI  Mootie Comp Protocols, S Markup Languays, Portals, Se	Layer: Conver Methods for M A DISSEMINA EMS ques, Data Ca Data Recovery ms: Communi ast Models, Sel MATION AND uning systems. ync- Synchron age (SMIL). M	aching, Chen Process, Issu ication Asym ective Tuning  MOBILE Synchronization Lang tobile Devices:	t- Server (es Relating metry, Classand Indexing on, Synchro uage for I Server and	Computing a to Quality Confication of g Techniques	and A of Ser f Dat ware:	8 H adapta vice. a-Deli for M g, Sy	ours Data very ours obile mc4J
Configuration TCP, Snoopi Mobile Netw UNIT IV  Databases: 1 Transaction 1 Dissemination Mechanisms, UNIT V  Mobile Synch Devices, Sy Synchronized Application S Mobile File S	n Protocol. Ming TCP, Mobiorks.  DATABAS BROADCA  Database Hormonication in Mobile S DEVICES Information in Models Server, Gatew	gistration, Turn bobile Transport ile TCP, Other  ESAND DATA STING SYST  arding Technic y Processing, I dicasting Syste ination Broadca  YNCHRONI  Moone Comp Protocols, S Markup Languays, Portals, Senity.	Layer: Conver Methods for M A DISSEMINA EMS ques, Data Ca Data Recovery ms: Communi ast Models, Sel ATION AND uning systems, ync- Synchrotage (SMIL). M rvice Discovery	aching, Chen Process, Issu ication Asym ective Tuning  MOBILE Synchronization Lang tobile Devices:	t- Server (es Relating metry, Classand Indexing on, Synchro uage for I Server and	Computing a to Quality Confication of Techniques mization Soft Mobile Com	and A of Ser f Dat ware i	8 H adapta vice. a-Deli for M g, Sy pile A	ours tion, Data very  ours obile mc4J gent
Configuration TCP, Snoopi Mobile Netw UNIT IV  Databases: 1 Transaction 1 Dissemination Mechanisms, UNIT V  Mobile Synch Devices, Sy Synchronized Application S Mobile File S	DATABAS BROADCA  Database Horomodels, Quern and Broad Data Dissem  MOBILE S DEVICES Ironization in inchronization in mehronization in mehronization in mehronization in Multimedia Server, Gatew Systems, Security Company Security	gistration, Tum bobile Transport ile TCP, Other  ESAND DATA STING SYST  arding Technic y Processing, I deasting Syste ination Broades  YNCHRONI  Mootie Comp Protocols, S Markup Languays, Portals, Se	Layer: Conver Methods for Manage (SMIL).	aching, Chen Process, Issu ication Asym ective Tuning  MOBILE Synchronizati nization Lang tobile Devices: y, Device Man	t- Server (es Relating metry, Classand Indexing on, Synchro uage for I Server and	Computing a to Quality Confication of Techniques mization Soft Mobile Com	and A of Ser f Dat ware i	8 H adapta vice. a-Deli for M g, Sy pile A	ours tion, Data very  ours obile mc4J gent
Configuration TCP, Snoopi Mobile Netw UNIT IV  Databases: 1 Transaction 1 Dissemination Mechanisms, UNIT V  Mobile Synch Devices, Sy Synchronized Application S Mobile File S	DATABAS BROADCA  Database Horomodels, Quern and Broad Data Dissem  MOBILE S DEVICES PROPRIES	eistration, Tum bobile Transport ile TCP, Other  ESAND DATA STING SYST  arding Technic y Processing, I deasting Syste ination Broades  YNCHRONI  Moone Comp Protocols, S Markup Languays, Portals, Se nity.	Layer: Convert Methods for Manager Methods for Met	aching, Chen Process, Issu ication Asym ective Tuning  MOBILE Synchronizati nization Lang tobile Devices: y, Device Man	t- Server (es Relating metry, Classand Indexing on, Synchro uage for I Server and	Computing a to Quality Confication or g Techniques mization Soft Mobile Com Management	and A of Ser f Dat ware i	8 H dapta vice. a-Deli for M g, Sy pile A	ours tion. Data very  ours obile mc4J gent
Configuration TCP, Snoopin Mobile Netw UNIT IV  Databases: Interpretation Dissemination Mechanisms, UNIT V  Mobile Syncity Devices, Synchronized Application S Mobile File S  COURSE O	DATABAS BROADCA  Database Horo Models, Quer n and Broad Data Dissem  MOBILE S DEVICES Promization i Multimedia Server, Gatew Systems, Secu	eistration, Tum bobile Transport ile TCP, Other  ESAND DATA STING SYST  arding Technic y Processing, I licasting Syste ination Broadca  YNCHRONI  Mootile Comp Protocols, S Markup Langua sys, Portals, Security.	Layer: Conver Methods for Manuel Methods for Methods fo	aching, Chen Process, Issu ication Asym ective Tuning  MOBILE Synchronizati nization Lang tobile Devices: y, Device Man	t- Server (es Relating metry, Classand Indexing on, Synchro uage for I Server and	Computing a to Quality Confication or g Techniques mization Soft Mobile Com Management	and A of Ser f Dat - ware: - ware: - Mol	8 H dapta vice. a-Deli for M g, Sy pile A	ours  tion Data very  ours  obile mc4J gent
Configuration TCP, Snoopi Mobile Netw UNIT IV  Databases: I Transaction I Disseminatio Mechanisms, UNIT V  Mobile Synci Devices, Sy Synchronized Application S Mobile File S  COURSE O	DATABAS BROADCA  Database Horo Models, Quer n and Broad Data Dissem  MOBILES DEVICES Promisation in Inchronization in Multimedia Server, Gatew Systems, Secu  UTCOMES: After compilexplain GS Describe M	eistration, Tum bobile Transport ile TCP, Other  ESAND DATA STING SYST  arding Technic y Processing, I deasting Syste ination Broader  YNCHRONI  Moone Comp Protocols, S Markup Langua sys, Portals, Se city.	Layer: Conver Methods for Manual Methods for Methods	aching, Chemore Process, Issuication Asymmetrive Tuning  MOBILE  Synchronization Langiobile Devices: y, Device Manual in the solution of the s	t- Server (es Relating metry, Classand Indexing on, Synchro uage for I Server and	Computing a to Quality Confication of Techniques mization Soft Mobile Com Management Total:	and A of Ser f Dat ware: puting	8 H dapta vice. a-Deli for M g, Sy pile A	ours  tion Data very  ours  ours
Configuration TCP, Snoopin Mobile Netw UNIT IV  Databases: Intransaction in Dissemination Mechanisms, UNIT V  Mobile Synch Devices, Synchronized Application S Mobile File S  COURSE Of CO1 CO2 CO3	DATABAS BROADCA  Database Horo Models, Quer n and Broad Data Dissem  MOBILES DEVICES Promisation in Inchronization in Multimedia Server, Gatew Systems, Secu  UTCOMES: After compilexplain GS Describe M	eistration, Tum bobile Transport ile TCP, Other  ESAND DATA STING SYST  arding Technic y Processing, I deasting Syste ination Broades  YNCHRONI  Moone Comp Protocols, S Markup Languays, Portals, Se nity.  EMPLOY/ Jetion of the com M and CDMA Jobile IP, and M	Layer: Conver Methods for Manual Methods for Methods	aching, Chemore Process, Issuication Asymmetrive Tuning  MOBILE  Synchronization Langiobile Devices: y, Device Manual in the solution of the s	t- Server (es Relating metry, Classand Indexing on, Synchro uage for I Server and	Computing a to Quality Confication of Techniques mization Soft Mobile Com Management Total:	and A of Ser f Dat ware: puting	8 H  dapta vice. a-Deli for M g, Sy pile A	ours  tion Data very  ours  ours  ours

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

1702CS551	COMPUTER GRAPHICS AND MULTIMEDIA LABORATORY	L	0	P 2	1
PREREQUI	SITE:	10		1 2	-
l Programmi					
	ing Paradigms				
	BJECTIVES:	IS I			
and (	xplore the various multimedia editing tools like Photoshop/EQV, audacity, Gar OpenCV utline the structure media processing tools	ragebi	and, i	Movie	
List of Exper	riments:				
l. To study	the various graphics commands in C language.		NAME OF TAXABLE PARTY.	ensetment.	-
2. Develop	the DDA Line drawing algorithm using C language				T
	the Bresenham's Line drawing algorithm using C language			777	1
	the Bresenham's Circle drawing algorithm using C language				
-	the C program for to display different types of lines				
	the following 2D Transformation operation Translation , Rotation and Scaling				
	the Line Clipping Algorithm				
A CONTRACTOR OF THE PARTY OF TH	the Polygone clipping algorithm	-			
J. FELLOUILL	me Forveone Chibbine disordini				
9. Procedure	e to draw the fan blades and to give proper animation using flash				
Procedure 10. Procedure	e to draw the fan blades and to give proper animation using flash e to simulate a ball hitting another ball using flash	en us	ing P	hotosh	000
Procedure O. Procedure O. Procedure O. Procedure	e to draw the fan blades and to give proper animation using flash	gn usi	ing P	hotosh	ор
Procedure O. Procedure O. Procedure O. Procedure	e to draw the fan blades and to give proper animation using flash e to simulate a ball hitting another ball using flash e to prepare a cover page for the book in your subject area, plan your own desi	gn usi		hotosh	
9. Procedur 10. Procedur 11. Procedur 12. Design a	e to draw the fan blades and to give proper animation using flash e to simulate a ball hitting another ball using flash e to prepare a cover page for the book in your subject area, plan your own desi banner using coral Draw				
Procedur     Procedur     Procedur     Procedur     Procedur     Procedur     Design a	e to draw the fan blades and to give proper animation using flash e to simulate a ball hitting another ball using flash e to prepare a cover page for the book in your subject area, plan your own desi banner using coral Draw				
9. Procedur 10. Procedur 11. Procedur 12. Design a Additional E	e to draw the fan blades and to give proper animation using flash e to simulate a ball hitting another ball using flash e to prepare a cover page for the book in your subject area, plan your own desi banner using coral Draw  xperiments:  1. Basic Graphics games in C language				
9. Procedur 10. Procedur 11. Procedur 12. Design a Additional E	e to draw the fan blades and to give proper animation using flash e to simulate a ball hitting another ball using flash e to prepare a cover page for the book in your subject area, plan your own desi banner using coral Draw  xperiments:  1. Basic Graphics games in C language				
9. Procedur 10. Procedur 11. Procedur 12. Design a Additional E	e to draw the fan blades and to give proper animation using flash e to simulate a ball hitting another ball using flash e to prepare a cover page for the book in your subject area, plan your own desi banner using coral Draw  xperiments:  1. Basic Graphics games in C language  UTCOMES: EMPLOYABILITY ENTRE PRENEURS HIP	Tota	al:	45 H	
9. Procedure 10. Procedure 11. Procedure 12. Design a Additional E	e to draw the fan blades and to give proper animation using flash e to simulate a ball hitting another ball using flash e to prepare a cover page for the book in your subject area, plan your own desi banner using coral Draw  **Experiments:  1. Basic Graphics games in C language  UTCOMES: EMPLOYABILITY ENTRE PRENEURS HIP  After completion of the course, Student will be able to	Tota	al:	45 H	
9. Procedur 10. Procedur 11. Procedur 12. Design a Additional E COURSE OF	e to draw the fan blades and to give proper animation using flash e to simulate a ball hitting another ball using flash e to prepare a cover page for the book in your subject area. plan your own desi banner using coral Draw  **  **  **  **  **  **  **  **  **	Tota	al:	45 H	
9. Procedure 10. Procedure 11. Procedure 12. Design a Additional E COURSE OF	e to draw the fan blades and to give proper animation using flash e to simulate a ball hitting another ball using flash e to prepare a cover page for the book in your subject area. plan your own desi banner using coral Draw  **  **  **  **  **  **  **  **  **	Tota	al:	45 H	
O. Procedur  10. Procedur  11. Procedur  12. Design a  Additional E  COURSE OF  CO2  CO3	e to draw the fan blades and to give proper animation using flash e to simulate a ball hitting another ball using flash e to prepare a cover page for the book in your subject area. plan your own desi banner using coral Draw  **xperiments:  1. Basic Graphics games in C language  UTCOMES: EMPLOYABILITY ENTRE PRENEURS HIP  After completion of the course, Student will be able to  The students should be able to implement small projects using Photoshop and The students should be able to manipulate the images and audio files using P  Audacity  Create 3D graphical scenes using open graphics library suits  Implement image manipulation and enhancement	Tota	al:	45 H	
O. Procedure 10. Procedure 11. Procedure 12. Design a Additional E COURSE OF CO2 CO3 CO4 CO5	e to draw the fan blades and to give proper animation using flash e to simulate a ball hitting another ball using flash e to prepare a cover page for the book in your subject area. plan your own desi banner using coral Draw  **  **  **  **  **  **  **  **  **	Tota	al:	45 H	
9. Procedure 10. Procedure 11. Procedure 12. Design a Additional E COURSE OF CO2 CO3 CO4 CO5 References:	e to draw the fan blades and to give proper animation using flash e to simulate a ball hitting another ball using flash e to prepare a cover page for the book in your subject area. plan your own desi banner using coral Draw  **  **  **  **  **  **  **  **  **	Tota	al:	45 H	
9. Procedur 10. Procedur 11. Procedur 12. Design a Additional E COURSE OF CO2 CO3 CO4 CO5 References:	e to draw the fan blades and to give proper animation using flash e to simulate a ball hitting another ball using flash e to prepare a cover page for the book in your subject area. plan your own desi banner using coral Draw  **xperiments:  1. Basic Graphics games in C language  UTCOMES: EMPLOYABILITY ENTRE PRENEURS HIP  After completion of the course, Student will be able to  The students should be able to implement small projects using Photoshop and The students should be able to manipulate the images and audio files using P  Audacity  Create 3D graphical scenes using open graphics library suits  Implement image manipulation and enhancement  Create 2D animations using tools	Tota	al:	45 H	
9. Procedure 10. Procedure 11. Procedure 12. Design a Additional E COURSE OF CO1 CO2 CO3 CO4 CO5 References: 1. spoken-1 2. http://www.	e to draw the fan blades and to give proper animation using flash e to simulate a ball hitting another ball using flash e to prepare a cover page for the book in your subject area. plan your own desi banner using coral Draw  ***xperiments:*  1. Basic Graphics games in C language  UTCOMES: EMPLOYABILITY ENTRE PRENEURS HIP  After completion of the course, Student will be able to  The students should be able to implement small projects using Photoshop and The students should be able to manipulate the images and audio files using P  Audacity  Create 3D graphical scenes using open graphics library suits  Implement image manipulation and enhancement  Create 2D animations using tools  tutorial.org  ww.cosc.canterbury.ac.nz/people/mukundan/cogr/DDA html	Tota	al:	45 H	
9. Procedure 10. Procedure 11. Procedure 12. Design a Additional E COURSE OF CO1 CO2 CO3 CO4 CO5 References: 1. spoken-1 2. http://ww	e to draw the fan blades and to give proper animation using flash e to simulate a ball hitting another ball using flash e to prepare a cover page for the book in your subject area. plan your own desi banner using coral Draw  **xperiments:  1. Basic Graphics games in C language  UTCOMES: EMPLOYABILITY ENTRE PRENEURS HIP  After completion of the course, Student will be able to  The students should be able to implement small projects using Photoshop and The students should be able to manipulate the images and audio files using P  Audacity  Create 3D graphical scenes using open graphics library suits  Implement image manipulation and enhancement  Create 2D animations using tools	d Aud	al:	45 H	

PRINCIPAL

1704CS552	CASE TOOLS LABORATORY	L	T	P	(
	(MINI PROJECT I)	0	0	2	1
PREREQUI		No. of the last			
	1. Software Engineering				
	2. Programming Concepts				3
COURSE O	BJECTIVES:				
	<ol> <li>To highlight the importance of object-oriented analysis and de-</li> </ol>				
	<ol><li>To show how we apply the process of object-oriented analysis</li></ol>	and design to	softw	rare	
	development.		17		
	<ol><li>To provide the necessary knowledge and skills in using object</li></ol>	oriented CAS	SE too	ls.	
	PERIMENTS:			-	
<ol> <li>To devel</li> </ol>	op a problem statement and Statement of Work.		Pelki		
	an IEEE standard SRS document. Also develop risk management an	d project plar	1		
	Use Cases and develop the Use Case model.				
	he business activities and develop an UML Activity diagram.				
<ol><li>Identity t</li></ol>	he conceptual classes and develop a domain model with UML Class	diagram.	-	, all of	
6. Using the	e identified scenarios find the interaction between objects and represe	ent them usin	g UM	L	
	on diagrams				
<ol><li>Draw the</li></ol>	State Chart diagram.				
	he User Interface, Domain objects, and Technical services. Draw the	partial layer	ed, log	rical	
	re diagram with UML package diagram notation and patterns				-
	mponent and Deployment diagrams.	and the second			
<ol><li>Practice :</li></ol>	forward engineering and reverse engineering				
		TOTAL	.: 4:	HO	UR
ADDITION.	AL EXPERIMENTS / INNOVATIVE EXPERIMENTS :				
	Exam Registration.				
3	Library Management System.				
COURSE O	After completion of the course, Student will be able to		- Ser		71
			-		
CO1	Design and implement projects using OO concepts.				
CO2	Recognize the role and function of each UML model in developing	object-orient	ted sof	tware	
CO3	Apply appropriate design patterns.				
CO4	Create code from design.				
CO5	Compare and contrast various testing techniques				
REFERENC					
1 Man	ual Prepared by the course instructor				
2. Craig	Larman, "Applying UML and Patterns: An Introduction to Object-C Iterative Development", Third Edition, Pearson Education, 2015.	Oriented Ana	lysis a	nd De	sig
-	//www.seminarsonly.com/computer%20science/itwin-seminar-repor	10.1			

COURSE OBJECTIVES:						7
COURSE OBJECTIVES:	SKILL DEVELOPMENT		0	0	64	I
1 To develop se						
The state of the s	f-learning skills of util	1. To develop self-learning skills of utilizing various technical resources to make a technical	urces to mak	e a tec	chmical	
2. To promote th	e technical presentation	2. To promote the technical presentation and communication skills.				
3. To impart the	knowledge on intonation	3. To impart the knowledge on intonation, word and sentence stress for improving commission commetence, identifying and overcoming problem sounds.	for improvi	Bu		
4. To promote th	4. To promote the ability for Interacting and sharing attitude.	g and sharing attitude.				
5. To encourage	5. To encourage the commitment-attitude to complete tasks.	de to complete tasks.				
The students are expected to make two presentations on advanced topics (recent trends) related to II year subjects. A faculty guide is to be allotted and he / she will guide and monitor the progress of the student and maintain attendance also. Students are encouraged to use various teaching aids such as powerpoint presentation and demonstrative models.	ike two presentations of allotted and he / she ints are encouraged to models.	on advanced topics (recent treatment) will guide and monitor the pruse various teaching aids such	ends) relater rogress of the h as powern	d to II ne stuc noint	year lent an	T
			TOT	AL: 3	TOTAL: 30 HOURS	CRS
EVALUATION SCHEME:						
	Continuous Asse	Continuous Assessment (100 Marks)				
Distribution of Marks for Continuous Assessment	tinuous Assessment	Marks				
Presentation I		40				
Report		10				
Presentation II		40				
	ATTESTED S	10				
Total Dr. S. RAM	Dr. S. RAMADALA	100				

1704GE551	LIFE SKILLS: APTITUDE - 1	L	T	P	C
	SKILL DEVELOPMENT	0	0	2	1 .
1. The 2. To b 3. To b facto 4. To b	BJECTIVES: students should be made to: rush up problem solving skill and to improve intellectual skill of the students e able to critically evaluate various real life situations by resorting to Analysis Of k ors e able to demonstrate various principles involved in solving mathematical problems cing the time taken for performing job functions.	3×			
5. Toe	nhance analytical ability of students				
	ugment logical and critical thinking of Student INTRODUCTION TO NUMBER SYSTEM, BASIC SHORTCUTS OF			S TT.	ours
UNITI	ADDITION, MULTIPLICATION, DIVISION			0 H	purs
divisions inv	or numbers — Types or Numbers - Divisionity rules - Finding the units digit - Find olving higher powers - LCM and HCF Models - Fractions and Digits — Square, Squ Shortcuts of addition, multiplication, Division.			– Cu	ibe,
UNIT II	RATIO AND PROPORTION, AVERAGES			6 H	ours
Problems on	Ratio - Properties of Ratios - Comparison of Ratios - Problems on Ratios - Compo Proportion, Mean proportional and Continued Proportion Definition of Average - Finding average using assumed mean Average - Problems on Weighted Average - Finding average using assumed mean	tules	of A	Lvera	ge
UNIT III	PERCENTAGES, PROFIT AND LOSS			6 H	MILES
Percentage e between Cos - Two differe	Percentage - Converting a percentage into decimals - Converting a Decimal in quivalent of fractions - Problems on percentages - Problems on Profit and Loss per t Price and Selling price - Discount and Marked Price - Two different articles sold a ent articles sold at same Selling Price - Gain% / Loss% on Selling Price.	rcem	tage-	Rela ost P	rice
UNIT IV	CODING AND DECODING, DIRECTION SENSE			6 H	
model - Solv	same set of letters - Coding using different set of letters - Coding into a number - ling problems by drawing the paths - Finding the net distance travelled - Finding the clocks - Droblems on shadows - Droblems on direction sense using symbols and no	dire	ection		
UNIT V	NUMBER AND LETTER SERIES NUMBER AND LETTER ANALOGIES ODD MAN OUT	7.00		6 H	ours
Miscellaneou on letter anal	enes - Product senes - oquares senes - cuoes senes - Americae senes - con is series - Place values of letters - Definition of Analogy - Problems on number at ogy - Problems on verbal analogy - Problems on number Odd man out - Problems on is on verbal Odd man out	nalo	gy -	Probl	lems
	TOT	AL		30 H	ours
publ 2. Arus 2017 3. R.S. 4. R.S. publ 5. Raje 6. B.S. Arih ASSESSME	i Sharma, "How to Prepare for Quantitative Aptitude for the CAT", 7 <sup>th</sup> edition, Mc ication, 2016.  Sharma, "How to Prepare for Logical Reasoning for CAT", 4 <sup>th</sup> edition, McGraw Ford and McGraw Ford Agarwal, "A modern approach to Logical reasoning", revised edition, S. Chand publication, "Quantitative Aptitude for Competitive Examinations", revised edition, Sication, 2017.  sh Verma, "Fast Track Objective Arithmetic", 3 <sup>rd</sup> edition, Arihant publication, 2018. Sijwalii and InduSijwali, "A New Approach to REASONING Verbal & Non-Verbaat publication, 2014.	Iills catio catio catio s.Cha	publi on, 20 ind	icatio	
	ve assignments will be conducted (5*10) - 50 Marks.	AD	MA	N M	.E., Ph.

1701MGX01			PROFESS	IONAL ET	HICS		L	T	P	С
							3	0	0	3
PREREQUIS	ITE:	Basic Understa	inding of Hu	man Values	Ethical thir	nking				
COURSE OB					,					
2 0.274										
1 T	o understa	and Human val	nes ethical	theory or	what of ath	vice mode	nlaco			
		ies and rights.	ucs, cuire	uncory, co	oues or en	ucs, work	Prace			
	The state of the s	nd engineering	experiment	tation glob	al issues a	nd contem	ערוביוטע			
	hical issues			marai Bara		- Constant	outur j			
Land Control of the C		and personal et	hics. legal	ethics, cul	tural associ	iated ethic	and			
		sponsibility.								
UNIT I	HUMAN	VALUES	Tr. ISMA			No. in the last			9 H	ours
Morals an	d Ethics - I	Ionesty - Integrit	ty - Values -	Work Ethic	- Civic Vin	tue - Respe	et for	Other		A CONTRACTOR OF A CONTRACTOR O
		nd Sharing - Self								
UNITII	ENGINE	ERING ETHICS A	ND PROFES	SIONALISM	1				-	ours
Scope of	Engineeri	ng Ethics'- Varie	ety of mora	l issues -	Types of in	ouiry - Ac	ceptir	e an		
responsibi	lity - Ethic	al dilemmas - M	foral autonom	my - Kohlb	erg's and G	illigan's the	orv -	Cons	ensus	and
controvers	y - Profes	sion and Profess	ionalism - N	Models of I	rofessional	Roles - Ri	ght ac	tion	theon	ies -
		responsibility -								
		- IEEE - Institutio					SEXCAS.	ATIANA -		
UNIT III		ERING AS SOCIA							9 H	ours
Engineerin	ig as expe	rimentation - En	gineers as re	esponsible	experimente	rs - Balanc	ed ou	tlook		
		Safety and risk -								
	as Traged	y - The Three Mil	le Island and	Chemobyl.						
UNIT IV	WORKPI	ACE RESPONSI	BILITIES AN	D RIGHTS					9 H	ours
		- Responsibilitie								
climate - (	Collegiality	and loyalty - N	Managing co	nflict - Res	pect for aut	hority - Co	llectiv	re bar	gaini	ng -
		flicts of interest -	Occupation	al crime - P	rofessional r	ights - Emp	loyee	rights	5	
UNIT V	GLOBAL	ISSUES	181						9 H	ours
		rations: Technol								
		st measures - En								
		l bio and eco cen						as m	anag	ers -
Consulting	engineers	- Engineers as ex	spert witness	es and advi	sors - Moral	the state of the s	-			
						lot	al:	4	15 H	ours
Further Read				the landary			- 7	4	194	
	1	. Sample code		e IETE, ASI	ME, ASCE,	Indian Insti	tute of	Mate	erials	8
		Management.								
COLDICTION		. Virtues for lif	-				1		-	
COURSE OU			DEVEROP	m GN'I					C.V.	- 1
COl		upletion of the co						1	article and	
COI		e engineering eth	ics theory wi	ith sustaine	d litelong le	aming to sh	ength	en au	tonon	10115
CO2	_	ng decisions.		11	C	1 1	- 1	47	1	1
002		tample of faith,					iensh	the v	workp	tace
CO3		pilities, rights of o					e .			0
CO3		te to shape a bet			ponsible and	a ethical ac	nons	to im	prove	me
	environin	ent and the lives	or world con		ESTED					

E.G.S. Pillay Engineering College, Thethi. Nagore - 611 002 Nagopattin (Dr) rame

1702CS601	an keep tend	WEB TECHNOLOGY	L	T	P	C
			3	2	0	4
COURSE OBJECTIVE	· c.					
UBJECTIVE	-	mpart the new concepts in Web Technologies				-
		levelop understanding about the different technologies used in	the 337	-14 11	ra- T	T-N-
	incl	uding XML, Perl, Rails and PHP	me we	MIG W	vide v	reu
		ning, Visual Programming, Database management systems.				
UNITI	INTRODUC	TION  L and XHTML- Standard X <u>HTML Document Struc</u> ture- Basic	-	- 1	9 H	oui
Style Sheets- S Properties – C UNIT II	Style Specifica olor- Alignme XML	ts- Tables- Forms- Frames. Cascading Style Sheets Introduction ation Formats- Selector Forms- Property value Forms - Font P ant of Text - Background Images- Span and Div Tags.	roperti	es- Li	st 9 H	our
ntroduction to	SGML - feat	tures of XML - XML as a subset of SGML - XML Vs HTML	- View	sofa	m XM	L
Origin and Us		ars and their Operations – Assignment Statements and Simple nentals of Arrays – Hashes References- Functions- Pattern Mat			utput -	
		n Perl -Using Perl for CGI Programming	cime -	THE	moun	ausu
UNIT IV	PHP & MvS				9H	our
Database Con UNIT V	RAILS & A				9 H	our
Layouts		Document Requests- Processing Forms-Rails Application wi	th Data	bases	-	
AJAX - AJax		ajax – Basics of Ajax – Rails with Ajax.	-			
AJAX - AJax			otal:		45 H	our
		T	otal:		45 H	our
	TCOMES:	EMPLOYABILITY	otal:		45 H	our
COURSE OU	TCOMES:	EMPLOYABILITY etion of the course, Students will be able to	otal:		45 H	our
COURSE OU	After comple	EMPLOYABILITY	otal:		45 H	our
COURSE OU	After comple Develop web Apply XML	EMPLOYABILITY etion of the course, Students will be able to pages using basic HTML	otal:		45 H	our
COURSE OU CO1 CO2 CO3	After comple Develop web Apply XML Implement C	EMPLOYABILITY etion of the course, Students will be able to pages using basic HTML techniques in web design			45 H	our
COURSE OU CO1 CO2 CO3 CO4	After comple Develop web Apply XML Implement C	EMPLOYABILITY etion of the course, Students will be able to pages using basic HTML techniques in web design GI using Perl HP & MySQL database connectivity for real world application			45 H	our
COURSE OU CO1 CO2 CO3 CO4 CO5 References:	After comple Develop web Apply XML Implement C Implement P Use AJAX w	EMPLOYABILITY etion of the course, Students will be able to pages using basic HTML techniques in web design GI using Perl HP & MySQL database connectivity for real world application with Rails.	ns .			our
COURSE OU CO1 CO2 CO3 CO4 CO5 References:	After comple Develop web Apply XML Implement C Implement P Use AJAX w	EMPLOYABILITY etion of the course, Students will be able to pages using basic HTML techniques in web design GI using Perl HP & MySQL database connectivity for real world application	ns .			our
COURSE OU CO1 CO2 CO3 CO4 CO5 References: 1. Deite 2. Koge	After comple Develop web Apply XML Implement C Implement P Use AJAX w  1 & Deitel, Nie nt Learning So	EMPLOYABILITY etion of the course, Students will be able to pages using basic HTML techniques in web design GI using Perl HP & MySQL database connectivity for real world application with Rails. eto, Lin, Sadhu, XML How to Program, Pearson Education, Ne	ns ew Delh New I	ni, 20 Delhi,	16 2013	
COURSE OU CO1 CO2 CO3 CO4 CO5 References: 1. Deite 2. Koge	After comple Develop web Apply XML Implement C Implement P Use AJAX w  1 & Deitel, Nie nt Learning So	EMPLOYABILITY  etion of the course, Students will be able to pages using basic HTML  techniques in web design  GI using Perl  HP & MySQL database connectivity for real world application with Rails.  eto, Lin, Sadhu, XML How to Program, Pearson Education, Ne	ns ew Delh New I	ni, 20 Delhi,	16 2013	
COURSE OU CO2 CO3 CO4 CO5 References: 1. Deite 2. Koge 3. Chris 2012 4. Phil F ,New	After comple Develop web Apply XML Implement C Implement P Use AJAX w  1 & Deitel, Nie at Learning So Bates, Web Pa  Sallard, Micha Delhi, 2012	EMPLOYABILITY etion of the course, Students will be able to pages using basic HTML techniques in web design CH using Perl HP & MySQL database connectivity for real world application with Rails. eto, Lin, Sadhu, XML How to Program, Pearson Education ,Ne plutions Inc. Web Technologies Black Book, Dreamtech Press, rogramming Building Internet Applications 3rd ed., Wiley Ind el Moncur, Sams Teach Yourself Ajax, JavaScript and PHP, P	ew Dell New I ia Editi earson	ni, 20 Delhi, on, N	16 2013 lew D	elhi
COURSE OU CO2 CO3 CO4 CO5 References: 1. Deite 2. Koge 3. Chris 2012 4. Phil F ,New 5. Achy	After comple Develop web Apply XML Implement C Implement P Use AJAX w  1 & Deitel, Nie at Learning So Bates, Web P  Ballard, Micha Delhi, 2012 at S Godbole,	EMPLOYABILITY  etion of the course, Students will be able to pages using basic HTML  techniques in web design  GI using Perl  HP & MySQL database connectivity for real world application with Rails.  eto, Lin, Sadhu, XML How to Program, Pearson Education ,Ne plutions Inc., Web Technologies Black Book, Dreamtech Press, rogramming Building Internet Applications 3rd ed., Wiley Ind	ew Dell New I ia Editi earson	ni, 20 Delhi, on, N	16 2013 lew D	elhí
COURSE OU CO2 CO3 CO4 CO5 References: 1. Deite 2. Koge 3. Chris 2012 4. Phil I ,New 5. Achyr ed., T	After comple Develop web Apply XML Implement C Implement P Use AJAX w  I & Deitel, Nie at Learning So Bates, Web P  Sallard, Micha Delhi, 2012 at S Godbole, ata McGraw F	etion of the course, Students will be able to pages using basic HTML techniques in web design GI using Perl HP & MySQL database connectivity for real world application with Rails. eto, Lin, Sadhu, XML How to Program, Pearson Education, Ne blutions Inc, Web Technologies Black Book, Dreamtech Press, rogramming Building Internet Applications 3rd ed., Wiley Ind el Moncur, Sams Teach Yourself Ajax, JavaScript and PHP, P Atul Kahate, Web Technologies TCP/IP Architecture and Jav	ew Dell New I ia Editi earson	ni, 20 Delhi, on, N	16 2013 lew D	elhi
COURSE OU CO1 CO2 CO3 CO4 CO5 References: 1. Deite: 2. Koge: 3. Chris 2012 4. Phil F ,New 5. Achyr ed., T 6. Panka 7. Banki	After comple Develop web Apply XML Implement C Implement P Use AJAX v  1 & Deitel, Nie at Learning So Bates, Web Pa  Ballard, Micha Delhi, 2012 at S Godbole, ata McGraw H  j Sharma, Intr	EMPLOYABILLITY etion of the course, Students will be able to pages using basic HTML techniques in web design CH using Perl HP & MySQL database connectivity for real world application with Rails.  eto, Lin, Sadhu, XML How to Program, Pearson Education, Ne plutions Inc. Web Technologies Black Book, Dreamtech Press, rogramming Building Internet Applications 3rd ed., Wiley Ind el Moncur, Sams Teach Yourself Ajax, JavaScript and PHP, P Atul Kahate, Web Technologies TCP/IP Architecture and Jav Hill Education Private Limited, New Delhi, 2015 oduction to Web Technology, Katson Books, New Delhi, 201- Bihari Barik, Introduction to Web Technology & Internet, Acm	ew Delli New I ia Editi earson	ni, 20 Delhi, on, N Educ:	16 2013 lew D	elhi

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

5.0.5. Billay Engineering College,

		ARTIFICIAL INTELLIGENCE		L	T	P	C
PREREQUI	SITE	Data Structures		3	1 0	0	3
COURSE O		And action of Anna San Control of					
COLLUZ O		. To learn problem solving methodologies	using Art	ificial Inte	llige	nce	
	2	. To introduce the concepts of machine lear			- Minn		
	3	To introduce AI programming languages		CANADA SALIKATA	New Street		
UNIT I	INTROI	DUCTION				9 Ho	urs
Introduction	to AI-Prob	lem formulation, Problem Definition, Proble	m solving	methods	- PT	oblem	
	atisfaction	xing and Heuristic functions —Hill Climbing - Related algorithms, Measure of performan- ng					
UNIT II	REPRES	SENTATION OF KNOWEDIGE			1500	9 H	ours
calculus, Res	olution, U	ion, Knowledge representation using Predica se of predicate calculus, Knowledge represen on of knowledge.	-			-	ate
UNIT III	KNOWI	LEDGE INFERENCE				9 H	ours
		ion -Production based system, Frame based s					
		ning, Rule value approach, Fuzzy reasoning -	Certaint	factors,	Baye	sian	
7		ork-Dempster - Shafer theory					
UNIT IV		ING ANI MACHINE LEARNING ystems - Strips - Planning with state-space se		100		THE CHARLES	ours
		ning from observation - Inductive learning - earning methods - Reinforcement Learning	Decision	trees – Ex	pian	ation	
UNIT V	atistical Le	earning methods - Reinforcement Learning GRAMMING LANGUAGES					ours
learning – St UNIT V Introduction Manipulation	AI PRO to Prolog Functions	earning methods - Reinforcement Learning GRAMMING LANGUAGES Introduction To Prolog: Syntax and Numeric In Prolog, Functions, Predicates and Condit Recursion, Property Lists and Arrays, Misce	Function	, Basic Li ut, Outpu Topics, L	ist t and	9 H Loca and O	I ther
learning – St UNIT V Introduction Manipulation Variables, Ite AI Programn	AI PRO to Prolog Functions eration and ning Langu	earning methods - Reinforcement Learning GRAMMING LANGUAGES Introduction To Prolog: Syntax and Numeric In Prolog, Functions, Predicates and Condit Recursion, Property Lists and Arrays, Misce	Function	, Basic Li ut, Outpu Topics, L Total:	ist t and ISP :	9 H Loca and O	I ther ours
learning – St UNIT V Introduction Manipulation Variables, Ite	AI PRO to Prolog Functions eration and ning Langu	earning methods - Reinforcement Learning GRAMMING LANGUAGES Introduction To Prolog: Syntax and Numeric In Prolog, Functions, Predicates and Condit Recursion, Property Lists and Arrays, Miscenages.	Function	, Basic Li ut, Outpu Topics, L Total:	ist t and ISP :	9 H Loca and O	I ther ours
learning – St UNIT V Introduction Manipulation Variables, Ite AI Programn Further Rea	AI PRO to Prolog Functions eration and ning Langu	earning methods - Reinforcement Learning GRAMMING LANGUAGES Introduction To Prolog: Syntax and Numeric is In Prolog, Functions, Predicates and Condit Recursion, Property Lists and Arrays, Misce lages.  Bot Applications, Deep Learning	Function ional, Inp ellaneous	, Basic Li ut, Outpu Topics, L Total:	ist t and ISP :	9 H Loca and O	I ther ours
learning – St UNIT V Introduction Manipulation Variables, Ite AI Programn	atistical Le AI PRO to Prolog a Functions eration and ning Langu ding:	Parning methods - Reinforcement Learning GRAMMING LANGUAGES Introduction To Prolog: Syntax and Numeric In Prolog, Functions, Predicates and Condit Recursion, Property Lists and Arrays, Miscenages.  Bot Applications, Deep Learning  EMMOYABILITY	Function ional, Inp ellaneous	Total:	ISP :	9 H Loca and O	I ther
learning – Str UNIT V Introduction Manipulation Variables, Ite AI Programm Further Rea COURSE OUTCOME	AI PRO to Prolog a Functions eration and ning Langu ding:	Earning methods - Reinforcement Learning GRAMMING LANGUAGES Introduction To Prolog: Syntax and Numerics In Prolog, Functions, Predicates and Condit Recursion, Property Lists and Arrays, Miscentages.  Bot Applications, Deep Learning  EMPOYABILITY  unpletion of the course, Student will be able to	Function ional, Inpellaneous	Total:	TTI VIAE	9 H Loca and Or 45 H ESTE	I ther
learning – Str UNIT V Introduction Manipulation Variables, Ite AI Programm Further Rea COURSE OUTCOME	AI PRO to Prolog Functions eration and ning Langu ding:  S: After con	Earning methods - Reinforcement Learning GRAMMING LANGUAGES Introduction To Prolog: Syntax and Numerics In Prolog, Functions, Predicates and Condit Recursion, Property Lists and Arrays, Miscenages.  Bot Applications, Deep Learning  EMMOTABILITY  Inpletion of the course, Student will be able to ent with problems those are amenable to solvent	Function ional, Inpellaneous	Total:	TTI VIAE PRII	9 H Loca and Or 45 H ESTE	OULS ON MARINE
learning – Str UNIT V Introduction Manipulation Variables, Ite AI Programm Further Rea COURSE OUTCOME CO1 CO2	atistical Le AI PRO to Prolog a Functions eration and ning Langu ding: S: After con Experime	Bot Applications, Deep Learning  EMMOYABLUTY  mpletion of the course, Student will be able to soluppropriate AI methods to solve a given problem.	Function ional, Inpellaneous	Total:	TTI VIAE PRII	9 H Loca and Or 45 H ESTE	OUTS OUTS OUTS
learning – Str UNIT V Introduction Manipulation Variables, Ite AI Programm Further Rea COURSE OUTCOME CO1 CO2 CO3	atistical Le AI PRO to Prolog a Functions eration and ning Langu ding:  S: After con Experime Choose a Formaliz	earning methods - Reinforcement Learning GRAMMING LANGUAGES Introduction To Prolog: Syntax and Numeric is In Prolog, Functions, Predicates and Condit Recursion, Property Lists and Arrays, Misce lages.  Bot Applications, Deep Learning  EMPLOYABILITY  Inpletion of the course, Student will be able to ent with problems those are amenable to solu impropriate AI methods to solve a given proble the AI problem using proper framework/lar	Function ional, Inpellaneous  of the property	Total:	TTI VIAE PRII	9 H Loca and Or 45 H ESTE	OUTS OUTS OUTS
learning – Str UNIT V Introduction Manipulation Variables, Ite AI Programm Further Rea COURSE OUTCOME CO1 CO2 CO3 CO4	atistical Le AI PRO to Prolog Functions Fration and ning Langu ding:  S: After con Experime Choose a Formaliz Impleme	Bot Applications, Deep Learning  EMPLOY A BILLTY  Inpletion of the course, Student will be able to sent with problems those are amenable to solve a given problem to solve a given problem to solve a given problem to solve a problem using proper framework/lant machine learning algorithms to solve AI problem	Function ional, Inpellaneous  Ition by Alemaguage roblems	Total:  Total:  Total:  Nagapa	TTI VIAE PRII	9 H Loca and Or 45 H ESTE	OUTS OUTS OUTS
learning – Str UNIT V Introduction Manipulation Variables, Ite AI Programm Further Rea COURSE OUTCOME CO1 CO2 CO3 CO4 CO5	atistical Le AI PRO to Prolog Functions Fration and ning Langu ding:  S: After con Experime Choose a Formaliz Impleme	earning methods - Reinforcement Learning GRAMMING LANGUAGES Introduction To Prolog: Syntax and Numeric is In Prolog, Functions, Predicates and Condit Recursion, Property Lists and Arrays, Misce lages.  Bot Applications, Deep Learning  EMPLOYABILITY  Inpletion of the course, Student will be able to ent with problems those are amenable to solu impropriate AI methods to solve a given proble the AI problem using proper framework/lar	Function ional, Inpellaneous  Ition by Alemaguage roblems	Total:  Total:  Total:  Nagapa	TTI VIAE PRII	9 H Loca and Or 45 H ESTE	OUTS
learning – Str UNIT V Introduction Manipulation Variables, Ite AI Programm Further Rea COURSE OUTCOME  CO1 CO2 CO3 CO4 CO5 References:	atistical Le AI PRO to Prolog a Functions eration and ning Langu ding:  S: After con Experime Choose a Formaliz Implement	Bot Applications, Deep Learning  EMPLOY A BLUTY  Inproblems those are amenable to solve a given problem the AI problem using proper framework/launt machine learning algorithms to solve AI programming the AI methodologies using AI programming the AI methodologies using AI programming and the AI methodologies using AI programming the AI methodologies using AI programming algorithms to solve AI programming algorithms and programming algorithms are programming algorithms.	Function ional, Inpellaneous  oution by Alemaguage roblems ing Langu	Total:  Total:  Total:  Total:  Total:  Total:  Total:  Total:  Total:	ATTI ATTI ATTI ATTI AYER AYER N. Na ay Er	9 H Loca and Or 45 H ESTE	Inther Course
learning – Str UNIT V Introduction Manipulation Variables, Ite AI Programm Further Rea COURSE OUTCOME CO1 CO2 CO3 CO4 CO5 References: 1. "Arti	AI PRO to Prolog a Functions eration and ning Langu ding:  S: After con Experime Choose a Formaliz Impleme Impleme	Bot Applications, Deep Learning  Bot Applications, Deep Learning  EMPOYABILITY  In problems those are amenable to solve a given problem the AI problem using proper framework/lant machine learning algorithms to solve AI programmic ligence" -By Elaine Rich And Kevin Knight	Function ional, Inpellaneous  Inpellaneous  Intion by Allem  Inguage	Total: Or. S. RAI  E.G.S. Pill  I method  Nagapa  lages  tion) Tata	ATTI ATTI ATTI ATTI AYER AYER N. Na ay Er	9 H Loca and Or 45 H ESTE	I ther D N, M
learning – Str UNIT V Introduction Manipulation Variables, Ite AI Programm Further Rea COURSE OUTCOME CO1 CO2 CO3 CO4 CO5 References: 1. "Artif	atistical Le AI PRO to Prolog a Functions eration and ning Langu ding:  S: After con Experime Choose a Formaliz Implement ificial Intellicial Intellic	Bot Applications, Deep Learning  Bot Applications, Deep Learning  EMPLOY A BLUTY  Inpropriate AI methods to solve a given proble  the AI problem using proper framework/langer the AI methodologies using AI programmic  ligence" -By Elaine Rich And Kevin Knight igence: A Modern Approach, Stuart Russel, I	Function ional, Inpellaneous  Inpellaneous  Intion by Allem  Inguage	Total: Or. S. RAI  E.G.S. Pill  I method  Nagapa  lages  tion) Tata	ATTI ATTI ATTI ATTI AYER AYER N. Na ay Er	9 H Loca and Or 45 H ESTE	I ther D N, M
learning – Str UNIT V Introduction Manipulation Variables, Ite AI Programm Further Rea COURSE OUTCOME  CO1 CO2 CO3 CO4 CO5 References: 1. "Arti 2. Artif 3. Intro	atistical Le AI PRO to Prolog a Functions eration and ning Langu ding:  S: After con Experime Choose a Formaliz Implementation in tellicial Intellicial Intellicia	Bot Applications, Deep Learning  Bot Applications, Deep Learning  EMPOYABILITY  In problems those are amenable to solve a given problem the AI problem using proper framework/lant machine learning algorithms to solve AI programmic ligence" -By Elaine Rich And Kevin Knight	Function ional, Inpellaneous  oution by Alemaguage roblems ing Language (2nd Edit Peter Nor	Total:  Total:  Or. S. RAI  F.G.S. Pill  Nagapa  Nagapa  tion) Tata  vig, PHI	ATTI ATTI ATTI ATTI AYER AYER AYER AYER AYER AYER AYER AYER	9 H Loca and Or 45 H ESTE  BALA CIPA ngineer gore - n (Dt) 1	I ther D N, M

reasuparement (set farm ment

1702CS603		DISTRIBUTED SYSTEMS	3	T 0	P	C
PREREQUIS	SITE ·		3	1 0	0	3
	1	Operating Systems				
	2	Computer Networks				
COURSE OF	TECTIVE					
COOKSE OF		w the various distributed computing system strategies.				
	Contract of the Contract of th	erstand the levels of message passing and call semantic				
		n the architecture of Remote Procedure Call	3.			
	The second secon	ware of the transaction models and deadlocks.				
UNIT I		erstand the purpose and categories of clock synchronization	ation.			
			*** * ***			ours
		buted Systems – Examples – Resource Sharing and the				
Joseph Mode	stread: Drie	tural and Fundamental Models – Networking and Inter ciples- Internet Protocols.	networkin	ig - 1)	pes c	I
UNIT II	ACCRECATE THE PARTY OF THE PART	ROCESS COMMUNICATION AND DISTRIBUTE	- T	-	O TT	
DIVILL II	OBJECT		D		y H	ours
nterwocess (	Commission of Contract of Cont	tion – The API for the Internet Protocols – External	Data Dan			2
Marchalling	Client Co	100 - The API for the internet Protocols - External	Data Kep	resem	anon	and
Marshamms -						
Whineste and D	careta Torre	rver Communication - Group Communication - C	ase Study	y - D	151110	uted
Objects and R	emote Invo	cation- Communication Between Distributed Objects	- Remote	Proce	ismo dure	uted
Objects and R - Events and l	emote Invo Votification	cation— Communication Between Distributed Objects s.	– Remote	Proce	dure	uted Call
Objects and R - Events and I UNIT III Fransactions - Vested	emote Invo Notification DISTRIB Locks - O	cation— Communication Between Distributed Objects  THE TRANSACTIONS AND CONCURRENCY  ptimistic Concurrency Control - Timestamp Ordering	- Remote	DL rison -	9 He Flat	Call ours and
Objects and R - Events and I UNIT III Fransactions - Vested Distributed Tr Distributed De	emote Invo Notification DISTRIB Locks - O ansactions - adlocks - T	cation— Communication Between Distributed Objects  THE TRANSACTIONS AND CONCURRENCY  Ptimistic Concurrency Control - Timestamp Ordering  Atomic Commit Protocols - Concurrency Control in I  Transaction Recovery.	- Remote	DL rison -	9 He Flat	cuted Call ours and
Objects and R - Events and I - Event	emote Invo Notification DISTRIB Locks - O ansactions - adlocks - T RESOUR	cation— Communication Between Distributed Objects  UTED TRANSACTIONS AND CONCURRENCY ptimistic Concurrency Control - Timestamp Ordering  Atomic Commit Protocols - Concurrency Control in I transaction Recovery.  CE MANAGEMENT	- Remote  CONTRO  CONTRO  COMPA  Compa  Distributed	Proce	9 He Flat sactio	call ours and ours
Objects and R Events and I UNIT III Fransactions Vested Distributed Tr Distributed De UNIT IV Finne and Glo Logical time elated probles	emote Invo Notification DISTRIB Locks - O ansactions - adlocks - T RESOUR bal States-I and logica distributed r ms.	cation— Communication Between Distributed Objects  UTED TRANSACTIONS AND CONCURRENCY ptimistic Concurrency Control - Timestamp Ordering  Atomic Commit Protocols - Concurrency Control in I transaction Recovery.  CE MANAGEMENT Introduction-Clocks, Events and Process states-Synch al clocks-Global states-Distributed debugging-Coord mutual exclusion-Elections Algorithm- Multicast comm	CONTRO CONTRO CONTRO COMPA Compa Distributed Conizing I Conizing I	Proce  DL  rison  d Trans  physics  nd Ag  -Conse	9 Hosaction 9 Hosaction 9 Hosaction greensus	ours and ours cks- ent- and
Objects and R Events and I UNIT III Fransactions Vested Distributed Tr Distributed Do UNIT IV Fime and Glo Logical time Introduction-I elated probles UNIT V	emote Invo Notification DISTRIB Locks - O sussections - eadlocks - T RESOUR bal States-l and logics distributed r ins. DISTRIB	cation— Communication Between Distributed Objects  UTED TRANSACTIONS AND CONCURRENCY ptimistic Concurrency Control - Timestamp Ordering  Atomic Commit Protocols - Concurrency Control in I transaction Recovery.  CE MANAGEMENT Introduction-Clocks, Events and Process states-Synch al clocks-Global states-Distributed debugging-Coord mutual exclusion-Elections Algorithm- Multicast communications  UTED FILE SYSTEM AND NAME SERVICES	CONTRO CONTRO CONTRO COMPA Distributed Conizing I Coniz	Proce  DL  rison -  l Trans  physics  nd Ag  -Conse	9 He saction 9 He saction greensus	ours and ours cks- ent- and
Objects and R Events and I UNIT III Fransactions Vested Distributed Tr Distributed De UNIT IV Finne and Glo Logical time entroduction-I elated probles UNIT V Distributed Fi	emote Invo Notification DISTRIB Locks - O ansactions - adlocks - T RESOUR bal States-I and logica distributed in ins. DISTRIB ie Systems-I	cation— Communication Between Distributed Objects  UTED TRANSACTIONS AND CONCURRENCY ptimistic Concurrency Control - Timestamp Ordering  Atomic Commit Protocols - Concurrency Control in I transaction Recovery.  CE MANAGEMENT Introduction-Clocks, Events and Process states-Synch al clocks-Global states-Distributed debugging-Coord mutual exclusion-Elections Algorithm- Multicast communication-File System AND NAME SERVICES introduction-File service architecture-Network File Sys	CONTRO CO	Proce  DL  rison -  l Trans  physics  nd Ag  -Conse	9 He saction 9 He saction greensus	ours and ours cks- ent- and
Objects and R Events and I UNIT III Fransactions Vested Distributed Tr Distributed De UNIT IV Finne and Glo Logical time entroduction-I elated probles UNIT V Distributed Fi	emote Invo Notification DISTRIB Locks - O ansactions - adlocks - T RESOUR bal States-I and logica distributed in ins. DISTRIB ie Systems-I	cation— Communication Between Distributed Objects  UTED TRANSACTIONS AND CONCURRENCY ptimistic Concurrency Control - Timestamp Ordering  Atomic Commit Protocols - Concurrency Control in I transaction Recovery.  CE MANAGEMENT Introduction-Clocks, Events and Process states-Synch al clocks-Global states-Distributed debugging-Coord mutual exclusion-Elections Algorithm- Multicast communications  UTED FILE SYSTEM AND NAME SERVICES	CONTRO CO	Proce  DL  rison -  l Trans  physics  nd Ag  -Conse	9 He saction 9 He saction greensus	ours and ours cks- ent- and
Objects and R Events and I UNIT III Fransactions Vested Distributed Tr Distributed De UNIT IV Finne and Glo Logical time entroduction-I elated probles UNIT V Distributed Fi	emote Invo Notification DISTRIB Locks - O ansactions - adlocks - T RESOUR bal States-I and logica distributed in ins. DISTRIB ie Systems-I	Cation— Communication Between Distributed Objects  UTED TRANSACTIONS AND CONCURRENCY ptimistic Concurrency Control - Timestamp Ordering  Atomic Commit Protocols - Concurrency Control in I transaction Recovery.  CE MANAGEMENT Introduction-Clocks, Events and Process states-Synchel clocks-Global states-Distributed debugging-Coord mutual exclusion-Elections Algorithm- Multicast commutual exclusion-Elections Algorithm- Multicast communication-File service architecture-Network File Systems and the Domain Name System-Directory Services.	CONTRO CO	Proce  DL  rison -  I Trans  physics  nd Ag  -Conse	9 He saction 9 He saction greensus	ours and ours cks- ent- and
Objects and R Events and I UNIT III Fransactions Vested Distributed To Distributed De UNIT IV Fime and Glo Logical time Introduction-I elated probles UNIT V Distributed File Introduction -1	emote Invo Notification DISTRIB Locks - O sussactions - sadlocks - T RESOUR bal States-I and logica distributed r ms. DISTRIB te Systems-I Name Service	Cation— Communication Between Distributed Objects  UTED TRANSACTIONS AND CONCURRENCY ptimistic Concurrency Control - Timestamp Ordering  Atomic Commit Protocols - Concurrency Control in I transaction Recovery.  CE MANAGEMENT Introduction-Clocks, Events and Process states-Synchel clocks-Global states-Distributed debugging-Coord mutual exclusion-Elections Algorithm- Multicast commutual exclusion-Elections Algorithm- Multicast communication-File service architecture-Network File Systems and the Domain Name System-Directory Services.	CONTRO CO	Proce  DL  rison -  I Trans  physics  nd Ag  -Conse	9 He saction 9 He sensus 9 He rices	ours and ours cks- ent- and
Objects and R Events and I UNIT III Fransactions Vested Distributed To Distributed De UNIT IV Fime and Glo Logical time Introduction-I elated probles UNIT V Distributed File Introduction -1	emote Invo Notification DISTRIB Locks - O ansactions - adlocks - T RESOUR bal States-I and logica distributed r ms. DISTRIB e Systems-I Name Service EADING /	Cation— Communication Between Distributed Objects  UTED TRANSACTIONS AND CONCURRENCY ptimistic Concurrency Control - Timestamp Ordering  Atomic Commit Protocols - Concurrency Control in I transaction Recovery.  CE MANAGEMENT Introduction-Clocks, Events and Process states-Synchel clocks-Global states-Distributed debugging-Coord mutual exclusion-Elections Algorithm- Multicast comm  UTED FILE SYSTEM AND NAME SERVICES Introduction-File service architecture-Network File Systems and the Domain Name System-Directory Services.  TO CONTENT BEYOND SYLLABUS / SEMINAR:	CONTRO CO	Proce  DL  rison -  I Trans  physics  nd Ag  -Conse	9 He saction 9 He sensus 9 He rices	ours and ours cks- ent- and
Objects and R Events and I UNIT III Fransactions Vested Distributed Tr Distributed De UNIT IV Finne and Glo Logical time elated probles UNIT V Distributed Fintroduction -1 CURTHER R	emote Invo Notification DISTRIB Locks - O ansactions - eadlocks - T RESOUR bal States-I and logica distributed r ms. DISTRIB e Systems-I Name Service EADING / em Architect	Cation— Communication Between Distributed Objects  UTED TRANSACTIONS AND CONCURRENCY ptimistic Concurrency Control - Timestamp Ordering  Atomic Commit Protocols - Concurrency Control in I ransaction Recovery.  CE MANAGEMENT Introduction-Clocks, Events and Process states-Synchol clocks-Global states-Distributed debugging-Coord nutual exclusion-Elections Algorithm- Multicast commutual exclusion-Elections Algorithm- Multicast commutual exclusion-File service architecture-Network File System and the Domain Name System-Directory Services.  TO CONTENT BEYOND SYLLABUS / SEMINAR: ture	CONTRO CO	Proce DL rison - d Trans physics nd Ag -Conse	9 He saction 9 He sensus 9 He rices	ours and ours cks- ent- and
Objects and R Events and I UNIT III Fransactions Vested Distributed Tr Distributed Do UNIT IV Fime and Glo Logical time Introduction-I elated probles UNIT V Distributed Fil Introduction -1 FURTHER R Google syste	emote Invo Notification DISTRIB Locks - O ansactions - eadlocks - T RESOUR bal States-I and logica distributed r ms. DISTRIB e Systems-I Name Service EADING / em Architect	Cation— Communication Between Distributed Objects  UTED TRANSACTIONS AND CONCURRENCY ptimistic Concurrency Control - Timestamp Ordering  Atomic Commit Protocols - Concurrency Control in I ransaction Recovery.  CE MANAGEMENT Introduction-Clocks, Events and Process states-Synchol clocks-Global states-Distributed debugging-Coord nutual exclusion-Elections Algorithm- Multicast commutual exclusion-Elections Algorithm- Multicast commutual exclusion-File service architecture-Network File System and the Domain Name System-Directory Services.  TO CONTENT BEYOND SYLLABUS / SEMINAR: ture	CONTRO CO	Proce DL rison - d Trans physics nd Ag -Conse	9 Horaction 9 Horaction 9 Horaction 9 Horaction 9 Horaction 9 Horactices HOTACTION HOTACTION 1 HOTACTI	ours and ours cks- ent- and
Objects and R Events and I UNIT III Fransactions Vested Distributed Tr Distributed Do UNIT IV Fime and Glo Logical time Introduction-I elated probles UNIT V Distributed Fil Introduction -1 FURTHER R Google syste	emote Invo Notification DISTRIB Locks - O ansactions - adlocks - T RESOUR bal States-I and logica distributed in ins. DISTRIB te Systems-I Name Service EADING / em Architectem Architectem	Cation— Communication Between Distributed Objects  UTED TRANSACTIONS AND CONCURRENCY ptimistic Concurrency Control - Timestamp Ordering  Atomic Commit Protocols - Concurrency Control in I transaction Recovery.  CE MANAGEMENT Introduction-Clocks, Events and Process states-Synch al clocks-Global states-Distributed debugging-Coord mutual exclusion-Elections Algorithm- Multicast communication-File service architecture-Network File Systems and the Domain Name System-Directory Services.  TO CONTENT BEYOND SYLLABUS / SEMINAR: ture exture	- Remote  CONTRO  CONTRO  CONTRO  COMPA  Distributed  ronizing plination a  numication  stem- Nam  OTAL:	Proce DL rison - d Trans physics and Ag -Conse	9 He saction 1 HOI	uted Call ours and ours cks- ent- and ours
Dispects and R Events and R Events and R UNIT III Fransactions Vested Distributed Tr Distributed De UNIT IV Finne and Glo Logical time Introduction-I elated probles UNIT V Distributed Fil Introduction -1 FURTHER R L Google syste L Amazon Sys	emote Invo Notification DISTRIB Locks - O ansactions - adlocks - T RESOUR bal States-I and logica distributed in ins. DISTRIB e Systems-I Name Service EADING / em Architectem Architectem	Cation— Communication Between Distributed Objects  UTED TRANSACTIONS AND CONCURRENCY ptimistic Concurrency Control - Timestamp Ordering  Atomic Commit Protocols - Concurrency Control in I transaction Recovery.  CE MANAGEMENT Introduction-Clocks, Events and Process states-Synchel clocks-Global states-Distributed debugging-Coord mutual exclusion-Elections Algorithm- Multicast commutual exclusion-Elections Algorithm- Multicast commutual exclusion-File service architecture-Network File Systems and the Domain Name System-Directory Services.  TO CONTENT BEYOND SYLLABUS / SEMINAR: ture	CONTRO CO	Proce  DL  rison -  i Trans  physics  nd Ag  -Conse  45	9 Horices -	uted Call ours and ours cks- ent- and ours
Dispects and R Events and R Events and R UNIT III Fransactions Vested Distributed Tr Distributed De UNIT IV Finne and Glo Logical time Introduction-I elated probles UNIT V Distributed Fil Introduction -1 FURTHER R L Google syste L Amazon Sys	emote Invo Notification DISTRIB Locks - O ansactions - adlocks - T RESOUR bal States-I and logica distributed in ins. DISTRIB is Systems-I Name Service EADING / em Architectem Architectem Architectem TCOMES: After comp	Cation— Communication Between Distributed Objects  UTED TRANSACTIONS AND CONCURRENCY ptimistic Concurrency Control - Timestamp Ordering  Atomic Commit Protocols - Concurrency Control in I transaction Recovery.  CE MANAGEMENT Introduction-Clocks, Events and Process states-Synchol clocks-Global states-Distributed debugging-Coord nutual exclusion-Elections Algorithm- Multicast commutual exclusion-Elections Algorithm- Multicast commutual exclusion-File service architecture-Network File System and the Domain Name System-Directory Services.  CONTENT BEYOND SYLLABUS / SEMINAR:  ture ecture	CONTRO CO	Proce  DL  rison -  i Trans  physics  nd Ag  -Consu	9 Hosaction 9 Hosaction 9 Horices HOU	ours and ours cks- ent- and ours TEC
Objects and R Events and I UNIT III Fransactions Vested Distributed Tr Distributed Do UNIT IV Fine and Glo Logical time Introduction-I elated probles UNIT V Distributed Fil Introduction -I CURTHER R L Google system L Amazon System COURSE OU	emote Invo Notification DISTRIB Locks - O sussactions - sadlocks - T RESOUR bal States-I and logica sistributed in ins. DISTRIB e Systems-I Name Service EADING / em Architectem Architectem Architectem Acquire kn	Cation—Communication Between Distributed Objects  UTED TRANSACTIONS AND CONCURRENCY ptimistic Concurrency Control - Timestamp Ordering  Atomic Commit Protocols - Concurrency Control in Intransaction Recovery.  CE MANAGEMENT Introduction-Clocks, Events and Process states-Synchell clocks-Global states-Distributed debugging-Coordinatual exclusion-Elections Algorithm- Multicast communication File System AND NAME SERVICES Introduction-File service architecture-Network File Systems and the Domain Name System-Directory Services.  TO CONTENT BEYOND SYLLABUS / SEMINAR:  ture ENPLOYABILITY pletion of the course, Student will be able to	CONTRO CO	Proce  DL  rison -  i Trans  physics  nd Ag  -Conse  45	9 Hosaction 1 Hotel 1 Hote	uted Call ours and ours cks- ent- and ours TEC
Dispects and R Events and R Events and R Events and R UNIT III Fransactions Vested Distributed Tr Distributed De UNIT IV Finne and Glo Logical time Introduction-I elated probles UNIT V Distributed Fintroduction -1 FURTHER R Google syste LAmazon System COURSE OU CO1	emote Invo Notification DISTRIB Locks - O ansactions - adlocks - T RESOUR bal States-I and logica distributed in ins. DISTRIB e Systems-I Name Service EADING / em Architect tem Architect TCOMES: After comp Acquire kn Explain in	Cation—Communication Between Distributed Objects  UTED TRANSACTIONS AND CONCURRENCY ptimistic Concurrency Control - Timestamp Ordering  Atomic Commit Protocols - Concurrency Control in I fransaction Recovery.  CE MANAGEMENT Introduction-Clocks, Events and Process states-Synchel clocks-Global states-Distributed debugging-Coord mutual exclusion-Elections Algorithm- Multicast comm  UTED FILE SYSTEM AND NAME SERVICES Introduction-File service architecture-Network File Systems and the Domain Name System-Directory Services.  TO CONTENT BEYOND SYLLABUS / SEMINAR: there exclure  ENPLOYABILARY  pletion of the course, Student will be able to mowledge in the basic concepts of distributed system.  terprocess communication and distributed objects.	CONTRO CO	Proce  DL  rison  I Trans  I Trans  AI  RAM/  PF  B Pillay	9 Hosaction 9 Hosa	ours and ours cks- ent- and ours  TEC
Objects and R - Events and I - Event	emote Invo Notification DISTRIB Locks - O sussactions - eadlocks - T RESOUR bal States-I and logica Distributed in ins. DISTRIB is Systems-I Vame Service EADING / em Architectem Architectem Architectem Architectem Acquire kn Explain in Exemplify	Cation—Communication Between Distributed Objects  UTED TRANSACTIONS AND CONCURRENCY ptimistic Concurrency Control - Timestamp Ordering  Atomic Commit Protocols - Concurrency Control in I transaction Recovery.  CE MANAGEMENT Introduction-Clocks, Events and Process states-Synchel clocks-Global states-Distributed debugging-Coord mutual exclusion-Elections Algorithm- Multicast comm  UTED FILE SYSTEM AND NAME SERVICES Introduction-File service architecture-Network File Systems and the Domain Name System-Directory Services.  TO  CONTENT BEYOND SYLLABUS / SEMINAR: ture exture  EMPLOYABILARY pletion of the course, Student will be able to mowledge in the basic concepts of distributed system.	CONTRO CO	Proce  DL  rison  I Trans  Physics  and Ag  -Conse  45  AI  RAM/  Pi  Pillay  Thethi, I	9 Hosaction 9 Hosa	ours and ours cks- ent- and ours  TEC

		1			
1703CS012	DATA WAREHOUSING AND DATA MINING	L	T	P	C
		3	0	0	3
PREREQUISIT					
	Database Management Systems	,			
	<ol> <li>Artificial Intelligence (classification &amp; Knowledge Management)</li> </ol>				
COURSE OBJ					
	<ol> <li>To understand the concepts of data warehousing with special e architecture and design.</li> </ol>	mphas	is on		
	2. To understand the concepts of data mining				
	3. To understand the use of Mathematics, Statistics and Informati	on Sci	ences	in	
	discovering knowledge from large databases.				
UNIT I	DATA WAREHOUSING		-	9 H	0.000
Security and the Control of the Cont	ta Warehouse, Multidimensional Data Model, Data Warehouse Architect	nra D	oto II		-
	Data Warehousing to Data Mining	me, D	ata w	arenc	ALDE:
UNIT II	INTRODUCTION TO DATA MINING		-	9 H	
	stics, Databases- Data mining on Different Kind of Data - Data Mining	Franci	ional	The second	C. C. C.
	Mining Task Primitives - Integration of a Data Mining System with em-Major Issues in Data Mining	a Da	itabas		
UNIT III	DATA PREPROCESSING AND DATA GENERALIZATION			9 H	
Committee of the Commit	Integration, Transformation, Reduction, Discretization, Concept H				tion
	ed Induction – An Alternative Method for Data Generalization and Conc	ept De	script	ion	
UNIT IV	ASSOCIATION RULES			0 H	70,000
Multi-Level As	le Mining, Single-Dimensional Boolean Association Rules from Transaction Databases, Multi-dimensional Association Databases, Multi-dimensional Association Rules from Transaction Databases, Multi-dimensional Association Databases, Multi-dimensional Databases, Multi-di	sociati			
UNIT V	asses and Data Ware houses, Association Mining to Correlation analysis CLASSIFICATION AND CLUSTERING		T	9 H	our
Classification a	nd Prediction, Issues, Decision Tree Induction, Bayesian Classif	ication	, Ru	ile B	aser
	Other Classification Methods, Prediction, Accuracy and Error Measur ategorization of major clustering methods, Partitioning methods, Hierarc				ysis
	To	tal:	- 5	45 H	our
Further Readin	g:	William		de al-ella	
	Descriptive data summarization				
	2. Constraint-Based Association Mining				
COURSE OUT	COMES: EMPLOY ABILITY.			Para	No.
	After completion of the course, Student will be able to				
COI	Recognize the basics of data warehousing.				
CO2	Understand the basic concepts of data mining		I LE AV		
CO3	Familiarize the data preprocessing and generalization.				
CO4					
CO5	Discriminate classification and clustering			12	
References:					
CHICAGO DE LOS MANDOS PORTECASOS.	and Micheline Kamber, Data Mining: Concepts and Techniques, Morgan	Kaufi	insu.	2011	
	Dunham, Data Mining: Introductory and Advanced Topics, Pearson Edu				
	niah, Data Warehousing Fundamentals: A Comprehensive Guide for IT P	rofess		,Wile	y-
200000000000000000000000000000000000000	ATTE	011	#	,	

1703CS037	10000		WEB TEC	CHNOLOGY		L	T	P	C
						3	0	0	3
COURSE									
OBJECTIVI	re-								
OBSECTIVI		o import the near	v concepts in We	h Tochnologies					
							* * **	+ + **	
			sianding about tr Perl. Rails and P	ne different techno	nogies used in	the wo	OTICI W	/lae V	Veb
Dronomicitos				me atabase managem	and careforms				
UNIT I	INTROD		riogramming, D	акаоазе шападеш	em systems.		-	9 H	
			I Standard VH	TM Document 9	trachus. Basic	Tout 1	Angles		OULS
				scading Style She					of
Style Sheets-	Style Specif	ication Formats-	Selector Forms	Property Value I	forms - Font P	roperti	es-Ti	st.	-
Properties - C	Color- Align	nent of Text - B	Sackground Imag	es- Span and Div	Tags.	P			
UNIT II	XML						1	9 H	ours
Introduction t		eatures of XML	- XML as a sub-	set of SGML - XI	AL VS HTML-	- View	s of a		
				Namespaces- XM					
				nents - Document					
				erting XML to HT					
sheets - XML									,
UNIT III	PERL							9H	ours
Origin and Us	se of Perl-S	alars and their (	Operations - Ass	ignment Statemer	its and Simple	Input a	nd Or	ntout -	
Control States	ments-Fund	amentals of Arra	ays - Hashes Ref	ferences- Function	s- Pattern Mate	ching -	File :	Enput	and
Output - Sim	-7					-			
or surfaces or or other	明代書的[新四條]相位	in Perl -Using l	Perl for CGI Pro	gramming.					
	PHP & M		Perl for CGI Pro	gramming.			1	9H	ours
UNIT IV	PHP & M	ySQL	Perl for CGI Pro	granuning.	s Operations ar	nd Exp	ressio		ours
UNIT IV Origin and U	PHP & M	ySQL verview of PHP	Perl for CGI Pro	gramming. ctic Characteristic				019-	
UNIT IV Origin and U Control States	PHP & M se of PHP- C ments- Array	ySQL verview of PHP rs- Functions-Par	Perl for CGI Pro	gramming ctic Characteristic Form Handling- F				019-	
UNIT IV Origin and Use Control States Database Con UNIT V	PHP & M se of PHP-C ments- Array mectivity Si RAILS &	verview of PHP rs-Functions-Par mole programs i AJAX	Perl for CGI Pro  General Syntac  ttern Matching- in PHP and MyS	gramming ctic Characteristic Form Handling- F QL.	iles-Cookies-S	ession	Track	ns- ing -	
UNIT IV Origin and U Control States Database Con UNIT V RAILS - Ove	PHP & M se of PHP-C ments- Array mectivity Si RAILS &	verview of PHP rs-Functions-Par mole programs i AJAX	Perl for CGI Pro  General Syntac  ttern Matching- in PHP and MyS	gramming ctic Characteristic Form Handling- F	iles-Cookies-S	ession	Track	ns- ing -	
UNIT IV Origin and U: Control State Database Cor UNIT V RAILS - Ove	PHP & Mose of PHP Coments - Array mectivity Si RAILS & rview of Kar	verview of PHP vs-Functions-Par mule programs i AJAX is-Document Re	Perl for CGI Pro  - General Syntas  ttern Matching- in PHP and MyS  equests- Processi	gramming.  ctic Characteristic Form Handling- F QL.  ing Forms- Rails	iles-Cookies-S	ession	Track	ns- ing -	
UNIT IV Origin and U: Control State Database Cor UNIT V RAILS - Ove	PHP & Mose of PHP Coments - Array mectivity Si RAILS & rview of Kar	verview of PHP vs-Functions-Par mule programs i AJAX is-Document Re	Perl for CGI Pro  General Syntac  ttern Matching- in PHP and MyS	gramming.  ctic Characteristic Form Handling- F QL.  ing Forms- Rails	iles-Cookies-S Application wit	ession h Data	Track bases	ns- cing - 9 H	ours
UNIT IV Origin and Use Control States Database Con UNIT V RAILS - Ove Layouts AJAX - Ajax	PHP & Mese of PHP-Coments- Array mectivity. Si RAILS & rylew of Kar Overview of	verview of PHP rs- Functions-Par mule programs i AJAX rs- Document Re Ajax – Basics of	Perl for CGI Pro  O General Syntas  Item Matching- in PHP and MyS  equests- Processi  of Ajax – Rails w	gramming.  ctic Characteristic Form Handling- F QL.  ing Forms- Rails	iles-Cookies-S Application wit	ession h Data	Track bases	9 H -	ours
UNIT IV Origin and U: Control State Database Cor UNIT V RAILS - Ove	PHP & M se of PHP-C ments- Array mectivity. Si RAILS & rview of Rai Overview of	verview of PHP rs- Functions-Par mule programs i AJAX rs- Document Re Ajax – Basics o	Perl for CGI Pro Perl f	gramming.  ctic Characteristic Form Handling- F QL.  ing Forms- Rails a  vith Ajax.	iles-Cookies-S Application wit	ession h Data	Track bases	ns- cing - 9 H	ours
UNIT IV Origin and U Control State Database Con UNIT V RAILS - Ove Layouts AJAX - Ajax	PHP & M se of PHP-C ments- Array mectivity Si RAILS & rview or Rai  Overview of After com	verview of PHP rs-Functions-Par mule programs i AJAX rs-Document Re Ajax - Basics of EM PLOY pletion of the con	Perl for CGI Pro Perl f	gramming.  ctic Characteristic Form Handling- F QL.  ing Forms- Rails a  vith Ajax.	iles-Cookies-S Application wit	ession h Data	Track bases	9 H -	ours
UNIT IV Origin and Unit Control States Database Country UNIT V RAILS - Over Layouts AJAX - Ajax COURSE OF	PHP & M se of PHP-C ments- Array mectivity. Si RAILS & rview of Rai Overview of TCOMES After com Develop v	Verview of PHP rs-Functions-Par nule programs i AJAX Is-Document Re Ajax – Basics of EM Proy pletion of the core peb pages using the	Perl for CGI Pro Perl f	gramming.  ctic Characteristic Form Handling- F QL.  ing Forms- Rails a  vith Ajax.	iles-Cookies-S Application wit	ession h Data stal:	Track bases	9 H - 45 H	ours
UNIT IV Origin and U Control State Database Cor UNIT V RAILS - Ove Layouts AJAX - Ajax COURSE OF	PHP & M se of PHP-C ments- Array mectivity. Si RAILS & rview of Kai Overview of TCOMES After com Develop v Apply XM	verview of PHP rs-Functions-Par mule programs i AJAX rs-Document Re Ajax – Basics of EM PLOY pletion of the cor reb pages using to L techniques in	Perl for CGI Pro Perl f	gramming.  ctic Characteristic Form Handling- F QL.  ing Forms- Rails a  with Ajax.  ill be able to	Application wit	h Data	Track bases	9 H - 45 H TED	ours ours
UNIT IV Origin and U Control State Database Cor UNIT V RAILS - Ove Layouts AJAX - Ajax COURSE OF	PHP & M se of PHP-C ments- Array mectivity. Si RAILS & rview of Kai Overview of TCOMES After com Develop v Apply XM	verview of PHP rs-Functions-Par mule programs i AJAX rs-Document Re Ajax – Basics of EM PLOY pletion of the cor reb pages using to L techniques in	Perl for CGI Pro Perl f	gramming.  ctic Characteristic Form Handling- F QL.  ing Forms- Rails a  with Ajax.  ill be able to	Application wit	h Data	Track bases	9 H - 45 H TED	ours ours
UNIT IV Origin and U Control State Database Cop UNIT V RAILS - Ove Layouts AJAX - Ajax COURSE OF	PHP & M se of PHP Coments - Array mectivity Si RAILS & rview of Rai Overview of After com Develop v Apply XM Implement	Verview of PHP rs- Functions-Par nule programs i AJAX Is- Document Re Ajax - Basics of Deletion of the cor be pages using to techniques in CGI using Perl PHP & MySQI	Perl for CGI Pro Perl f	gramming.  ctic Characteristic Form Handling- F QL.  ing Forms- Rails a  with Ajax.  ill be able to	Application wit	h Data	Track bases	9 H - 45 H TED	ours ours
UNIT IV Origin and Unit Control States Database Country RAILS - Over Layouts AJAX - Ajax COURSE OF CO1 CO2 CO3 CO4 CO5	PHP & M se of PHP Coments - Array mectivity Si RAILS & rview of Rai Overview of After com Develop v Apply XM Implement	verview of PHP rs-Functions-Par mule programs i AJAX rs-Document Re Ajax – Basics of EM PLOY pletion of the cor reb pages using to L techniques in	Perl for CGI Pro Perl f	gramming.  ctic Characteristic Form Handling- F QL.  ing Forms- Rails a  vith Ajax.	Application wit	h Data  AT  PR  Pillay  Sothi, M	Track bases TES TENENCIA Engine	9 H - 45 H TED AN, PAL eering 611	ours  M.E
UNIT IV Origin and U Control State Database Cor UNIT V RAILS - Ove Layouts AJAX - Ajax  COURSE OI  CO1  CO2  CO3  CO4  CO5  References:	PHP & M se of PHP-C ments- Array mectivity Si RAILS & rview of Rai Overview of TCOMES After com Develop v Apply XM Implement Use AJAX	Verview of PHP rs-Functions-Par mule programs i AJAX rs-Document Re Ajax – Basics of EM PLOY pletion of the cor reb pages using to techniques in CGI using Perl PHP & MySQI with Rails.	Perl for CGI Pro Perl f	gramming.  ctic Characteristic Form Handling- F QL.  ing Forms- Rails a  with Ajax.  ill be able to	Application with To Dr. 3. Forlid application Naga	h Data  AT  PR  Pillay I  Sothi, Mapattina	Track bases TES THNCH Engine lagore	9 H 45 H TED AN, PAL cering 611	ours  M.E
UNIT IV Origin and U Control State Database Con UNIT V RAILS - Ove Layouts AJAX - Ajax COURSE OF CO1 CO2 CO3 CO4 CO5 References: 1. Deite	PHP & Mose of PHP Coments - Array mectivity Si RAILS & rview or Rail Overview of Coments - After complete purchased in the Alphy XM Implement Use AJAX of & Deitel, Market Si & Deitel, Ma	Verview of PHP rs-Functions-Par mule programs i AJAX rs-Document Re Ajax - Basics of pletion of the cor reb pages using the content recording per techniques in CGI using Perl PHP & MySQI with Rails.	Perl for CGI Pro Perl f	gramming.  ctic Characteristic Form Handling- F QL.  ing Forms- Rails a  with Ajax.  ill be able to  ctivity for real wo	Dr. 3. Forlid application Naga	h Data  AT  PR  Pillay in this, Napattina	Track bases TES	9 H  45 H  TED  AN, PAL  eering 611  Tami	ours  M.E
UNIT IV Origin and Unit Control States Database Country RAILS - Over Layouts AJAX - Ajax COURSE OF CO2 CO3 CO4 CO5 References: 1. Deite	PHP & M se of PHP-C ments- Array mectivity Si RAILS & rview or Rai Overview of After com Develop v Apply XM Implement Use AJAX d & Deitel, 1 mt Learning	AJAX  Basics of the control th	Perl for CGI Pro Perl f	gramming.  ctic Characteristic Form Handling- F QL.  ing Forms- Rails A  with Ajax.  ill be able to  ctivity for real wo  Program, Pearson  s Black Book, Dr	Dr. 3. Fordation with the polication with the	h Data  AT  PR  Pillay  Sothi, M  apattina  w Delh  New D	Track bases TES TES Engine lagore am (Dt	9 H 45 H TED AN, PAL cering 611 ) Tami	ours M.E
UNIT IV Origin and Unit Control States Database Countrol States Database Countrol States UNIT V RAILS - Over Layouts AJAX - Ajax COURSE OF CO1 CO2 CO3 CO4 CO5 References: 1. Deite 2. Koge 3. Chris	PHP & M se of PHP-Coments- Array mectivity. Si RAILS & rview of Rai Overview of After com Develop v Apply XM Implement Use AJAX of & Deitel, M at Learning Bates, Web	AJAX  Basics of the control of the c	Perl for CGI Pro Perl f	gramming.  ctic Characteristic Form Handling- F QL.  ing Forms- Rails a  with Ajax.  ill be able to  ctivity for real wo	Dr. 3. Fordation with the polication with the	h Data  AT  PR  Pillay  Sothi, M  apattina  w Delh  New D	Track bases TES TES Engine lagore am (Dt	9 H 45 H TED AN, PAL cering 611 ) Tami	ours M.E
UNIT IV Origin and Unit Control States Database Control States Database Control States UNIT V RAILS - Ove Layouts AJAX - Ajax COURSE OF CO1 CO2 CO3 CO4 CO5 References: 1. Deitte 2. Koge 3. Chris 2012	PHP & Mose of PHP Coments - Array mectivity Si RAILS & rview or Rail Overview of Coments - Array of Coments	Verview of PHP rs-Functions-Par mule programs i AJAX rs-Document Re Ajax – Basics of EM PLOY pletion of the cor reb pages using be techniques in CGI using Perl PHP & MySQI with Rails. Vieto, Lin, Sadhu Solutions Inc, W Programming B	Perl for CGI Pro Perl f	gramming.  ctic Characteristic Form Handling- F QL.  ing Forms- Rails a  with Ajax.  ill be able to  ectivity for real we Program, Pearson s Black Book, Dro Applications 3rd	Dr. 3. Forld application with the property of	h Data  AT  AT  PR  Pillay  Sothi, Mapattina  w Delh  New I  a Editi	Track bases TES THOCH Engine lagore am (Di ni, 201) Delhi, on, N	9 H 45 H TED AN, PAL eering 611 ) Tami	ours M.E
UNIT IV Origin and Unit Control States Database Cou UNIT V RAILS - Ove Layouts AJAX - Ajax COURSE OF CO2 CO3 CO4 CO5 References: 1. Deite 2. Koge 3. Chris 2012 4. Phil I	PHP & Mose of PHP Coments - Array mectivity Si RAILS & rview or Rail Overview of Coments - After complete purchased of the	AJAX  Basics of the content Resident of the content Resident AJAX  Content Resident AJAX  AJAX  AJAX  AJAX  AJAX  AJAX  Basics of the content Resident AJAX  Content Resident AJAX  AJAX  AJAX  AJAX  Basics of the content Resident AJAX  Content AJAX  AJAX  AJAX  Basics of the content Resident AJAX  AJAX  AJAX  AJAX  AJAX  Basics of the content AJAX  Basics of th	Perl for CGI Pro Perl f	gramming.  ctic Characteristic Form Handling- F QL.  ing Forms- Rails A  with Ajax.  ill be able to  ctivity for real wo  Program, Pearson  s Black Book, Dr	Dr. 3. Forld application with the property of	h Data  AT  AT  PR  Pillay  Sothi, Mapattina  w Delh  New I  a Editi	Track bases TES THOCH Engine lagore am (Di ni, 201) Delhi, on, N	9 H 45 H TED AN, PAL eering 611 ) Tami	ours M.E
UNIT IV Origin and Unit Control States Database Country RAILS - Over Layouts AJAX - Ajax COURSE OF CO2 CO3 CO4 CO5 References: 1. Deite 2. Koge 3. Chris 2012 4. Phil I	PHP & Mose of PHP Coments - Array mectivity Si RAILS & rview of Rail Overview of After com Develop was Apply XM Implement Use AJAX of & Deitel, 1 at Learning Bates, Web Ballard, Michael Delhi, 2012	AJAX  Basics of the control of the c	Perl for CGI Pro Perl f	gramming.  ctic Characteristic Form Handling- F QL.  ing Forms- Rails A  with Ajax.  ill be able to  ctivity for real wo  Program, Pearson  s Black Book, Dn  Applications 3rd  elf Ajax, JavaScri	Dr. S. Forld application with the property of	h Data  tal:  AT  PR  Pillay    Sethi, N  upattina  w Delh  New D  a Editi	Track bases  TES  THNCI Engine legore am (Dt  ni, 201 Delhi, on, N	AN, PAL cering 611 16 2013 ew De	ours M.E.,
UNIT IV Origin and Unit Control States Database Country RAILS - Over Layouts AJAX - Ajax COURSE OF CO2 CO3 CO4 CO5 References: 1. Deite 2. Koge 3. Chris 2012 4. Phil I	PHP & Mose of PHP Coments - Array mectivity Si RAILS & rview of Rail Overview of After com Develop was Apply XM Implement Use AJAX of & Deitel, 1 at Learning Bates, Web Ballard, Michael Delhi, 2012	AJAX  Basics of the control of the c	Perl for CGI Pro Perl f	gramming.  ctic Characteristic Form Handling- F QL.  ing Forms- Rails a  with Ajax.  ill be able to  ectivity for real we Program, Pearson s Black Book, Dro Applications 3rd	Dr. S. Forld application with the property of	h Data  tal:  AT  PR  Pillay    Sethi, N  upattina  w Delh  New D  a Editi	Track bases  TES  THNCI Engine legore am (Dt  ni, 201 Delhi, on, N	AN, PAL cering 611 16 2013 ew De	ours M.E.,
UNIT IV Origin and Unit Control States Database Countrol States Database Countrol States Database Countrol RAILS - Over Layouts AJAX - Ajax  COURSE OF CO3 CO4 CO5 References:  1. Deite 2. Koge 3. Chris 2012 4. Phil I New 5. Achy	PHP & M se of PHP-C ments- Array mectivity. Si RAILS & rview of Rai Overview of After com Develop v Apply XM Implement Use AJAM il & Deitel, M int Learning Bates, Web Ballard, Mic Delhi, 2012 ut S Godbol	AJAX  S- Document Re AJAX  S- Document Re AJAX  S- Document Re AJAX  S- Document Re AJAX  Length Ploy pletion of the core pages using to techniques in CGI using Perl PHP & MySQI with Rails.  Solutions Inc, W Programming B hael Moncur, Sate e, Atul Kahate,	Perl for CGI Pro Perl f	gramming.  ctic Characteristic Form Handling- F QL.  ing Forms- Rails A  with Ajax.  ill be able to  ctivity for real wo  Program, Pearson  s Black Book, Dn  Applications 3rd  elf Ajax, JavaScri	Dr. S. forld application with the property of	h Data  tal:  AT  PR  Pillay    Sethi, N  upattina  w Delh  New D  a Editi	Track bases  TES THOCK Engine legore am (Dt Delhi, on, N	AN, PAL cering 611 16 2013 ew De	ours M.E. Goll 002.
UNIT IV Origin and Unit Control States Database Countrol States Database Countrol RAILS - Over Layouts AJAX - Ajax COURSE OF CO1 CO2 CO3 CO4 CO5 References: 1. Deite 2. Koge 3. Chris 2012 4. Phil I New 5. Achy ed., T	PHP & M se of PHP-Coments- Array ments- Array Overview of Kar After com Develop v Apply XM Implement Use AJAX of & Deitel, 1 mt Learning Bates, Web Ballard, Mic Obelhi, 2012 ut S Godbol fata McGraw array of McGraw array	AJAX  S- Document Ra  AJAX  S- Document Ra  AJAX  S- Document Ra  AJAX  S- Document Ra  AJAX  Level Proy  pletion of the cor  reb pages using be  CGI using Perl  CGI using Perl  PHP & MySQI  with Rails.  Neto, Lin, Sadha  Solutions Inc, W  Programming B  hael Moncur, Sar  e, Atul Kahate,  Hill Education	Perl for CGI Pro Perl f	gramming.  ctic Characteristic Form Handling- F QL.  ing Forms- Rails A  with Ajax.  ill be able to  ctivity for real we Program, Pearson S Black Book, Dr Applications 3rd  elf Ajax, JavaScri ies TCP/IP Archit	Dr. 3. Ford application with the price of th	h Data  AT  AT  PR  Pillay  Sothi, Mapattina  w Delh  New I  a Editi  a Progr	Track bases  TES THOCK Engine legore am (Dt Delhi, on, N	AN, PAL cering 611 16 2013 ew De	ours M.E.,
UNIT IV Origin and Unit Control States Database Country RAILS - Over Layouts AJAX - Ajax COURSE OF CO1 CO2 CO3 CO4 CO5 References: 1. Deite 2. Koge 3. Chris 2012 4. Phil I New 5. Achy ed., T 6. Panks	PHP & Mose of PHP Coments - Array mectivity Si RAILS & rview or Rail Overview of Apply XM Implement Use AJAX I & Deitel, Mart Learning Bates, Web Ballard, Michael & Godbol ata McGrawaj Sharma, In Sh	AJAX  Is- Document Re  AJAX  Is- Document Re  Ajax — Basics of the correlation of the cor	Perl for CGI Pro Perl f	gramming.  ctic Characteristic Form Handling- F QL.  ing Forms- Rails a  with Ajax.  ill be able to  ctivity for real we  program, Pearson s Black Book, Dro Applications 3rd  elf Ajax, JavaScri ies TCP/IP Archit New Delhi, 2015	Dr. 3. F  Dr. 3. F  orld application with the second appli	h Data  AT  AT  PR  Pillay  Tothi, N  apattina  w Delh  New I  a Editi	Track bases  TES  THNCH Engine lagore am (Dt  ni, 201 Delhi, on, N	9 H 45 H TED AN, PAL eering 611 ) Tami 16 2013 ew De	ours  M.E  Coll 002. I Nac

1702CS651		WEB TECHNOLOGY LABORATORY	L	T	P	C
		A SECURITION OF STREET	0	. 0	2	1
PREREQU		Computer Networks				
COURSE O	BJECTIVES:					
		velop webpages using HTML and CSS				
		with advanced programming such as PHP/Perl				
		e AJAX in implementing Rails				
List of Expe						
	ograms using HTM					
	s using cascading					
	s to create dynami		4411			
		XML as data store	nd p			
	s using Perl					
		HP & MySQL database connectivity				
The state of the s	s using Perl					
The state of the s	s using AJAX		en il let	- 10		
<ol><li>Program</li></ol>	s using Rails				10,012	
10. Case Stu	dy: Create a web	application for the given problem statement				
			Tot	al:	45 H	our
Additional I	Experiments:				12-11-	
	1. Program	s for Rails with AJAX				
	2. Program	s to implement JSON				-
COURSE O	UTCOMES:	EMPLOYABILITY				
2000	After completion	of the course, Student will be able to				
COI		ges using basic HTML				
CO2		uniques in web design				
CO3	Implement CGI	using Perl		A E		
CO4	Implement PHP	& MySQL database connectivity for real world appli	cations			
CO5	Use AJAX with					
References:						
1. Deite	el & Deitel, Nieto,	Lin, Sadhu, XML How to Program, Pearson Educati	on New	Dell	ni. 201	1
2. Koge 2009	ent Learning Solut	ions Inc, Web Technologies Black Book, Dreamtech	Press, N	ew D	elhi,	
	Bates, Web Prog i, 2009	ramming Building Internet Applications 3rd ed., Wil	ey India l	Editi	on, Ne	ew
4. Phil		Moncur, Sams Teach Yourself Ajax, JavaScript and F	HP, Pear	rson .	Educa	tion
5. Achy	rut S Godbole , At	rul Kahate, Web Technologies TCP/IP Architecture a Hill Education Private Limited, New Delhi, 2010	nd Java I	rogr	ammi	ng,
THE RESERVE TO STATE OF THE PARTY OF THE PAR		action to Web Technology, Katson Books, New Delh	i. 2008			
7. Bank		ari Barik, Introduction to Web Technology & Interne	t, Acme I	Learr	ning	
	HE INCOME.	ATTES		-		_

1704CS652		MOBILE APPLICATION DEVELOPMENT LABORATORY	L	T	P	С
		(MINI PROJECT II)	0	0	2	1
PREPERTURE	CITE	Programming Paradigms				
PREREQUI:	SHE	Piogramming Paraulgins				
OBJECTIVE	re.					
OBJECTIVE		explore about the structure of mobile development framework			TVI	
		analyze the issues of mobile application		1		
		develop the dynamic application using various parts of androi-	d project	is.		
List of Exper		develop the dynamic application asing various parts of andices	a project			
		ctive application with different layout managers	239			
		tions with Multiple Activities and a Simple Menu using variou	View o	ntion	*	
		ation for calculator operation	2 9 30 19 0	Puon	-	- 17
		ation that implements multi thread concepts	1007			
		ration using all Google map API functionalities		_		
		nic application that implements database manipulation	100		- //	
	Marine Street, Square,	RESIDENCE DE LOCALISACIONE DE LA CONTRACTOR DE LA CONTRAC		-		-
		oriented application using A/V function				
		ation that writes data to the SD card.	M			
		ration that creates an alert upon receiving a message.			-	
10. Deve	elop an senso	r based application for ballgame sensor	1	- 1		A-10-10-11-7-2-1
:=			Tot	a1:	45 H	ours
Additional E						
		velop an application that makes use of RSS Feed.				_
	2. W	rite a mobile application that creates alarm clock.	100			
COURSE OUTCOME:	S:	SKILL DEVELOPMENT ENTREPRENEURCH	HP			
	After comp	letion of the course. Student will be able to	13			
COI	To understa	and the working of mobile application development				
CO2	To paraphr	ase the multiple activity options in one application				
CO3	To underst	and the background data processing about the application				
CO4	To analyze	the inter-thread communication between the activities and fun	ctions	N.	-	
CO5	To describe	about the sensor implementation in android		9		
References:			No Alle		1 H	
	Complete Color Street Color Color Color	nmers: An App-Driven Approach by Paul J. Deitel , Harvey De edition 2015	eitel , Al	exand	ler	
<ol><li>Android .</li></ol>		Development in 24 Hours, by Carmen Delessio , Lauren Darce	y , Shan	e Cor	nder S	ams
3. Android	The state of the s	roblems and Solutions for Android Developers by Ian Darwin	Shroff/C	Reil	ly;	
A STATE OF THE PARTY OF THE PAR		rogramming with Android Studio by J. F. DiMarzio Wiley pub	lication l	Fourt	h edit	ion

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

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

1704GE68	LIFE SKILLS: APTITUDE II	L	Tr	TD	C
1/04GE0	SKILL DEVE LOPMENT	0	0	7	1
PREREQ			10	1-	
	Problem Solving techniques		T		
	EVEN ALL DE VENEZA EL MANAGENTA				
COURSE	OBJECTIVES:			187	
	<ol> <li>To brush up problem solving skill and to improve intellect</li> </ol>				
	<ol><li>To be able to critically evaluate various real life situation key issues and factors</li></ol>	as by resorting	to A	nalysi	s Of
	<ol><li>To be able to demonstrate various principles involved in so and thereby reducing the time taken for performing job fur</li></ol>		itical	probl	ems
	4. To enhance analytical ability of students				
	5. To augment logical and critical thinking of Student				
UNITI	Partnership, Mixtures and Allegations, Problem on Ages, Si	mple Interest,		6 H	ours
	Compound Interest				
	on Partnership - Relation between capitals, Period of investme				
mixtures -	Allegation rule - Problems on Allegation - Problems on ages -	- Definitions Si	imple	Inter	est -
Problems of	on interest and amount - Problems when rate of interest and time	period are num	erica	lly eq	ual -
Definition	and formula for amount in compound interest - Difference betwee	n simple intere	st and	i	
compound	interest for 2 years on the same principle and time period.				
UNIT II	Blood relations, , Clocks, Calendars		100	6 H	ours
The state of the s	he various relations among the members of a family - Solving Blo	ood Relation m	177]e:	10 1 2 TO S	
	ocks - Definition of a Leap Year - Finding the number of Odd days Finding the day of any random calendar date	s - Framing the	year	code :	For
UNIT III	Time and Distance, Time and Work			6 H	ours
Relation b	etween speed, distance and time - Converting kniph into m/s	and vice versa	- Pro	blem	s on
average sp	peed - Problems on relative speed - Problems on trains - Prob	olems on boats	and	stress	ms -
Days, Hou	on circular tracks - Problems on races - Problems on Unitary me rs and Work - Problems on Man-Day-Hours method - Problems of				
Pipes and					
	Data Interpretation and Data Sufficiency			THE REPORT OF THE PARTY OF THE	ours
	on taousar form - Problems on Line Grapus - Problems on Bar Gra	phs - Problems	on P	e Cha	Its -
A STATE OF THE PARTY OF THE PAR	nodels in Data Sufficiency - Problems on data redundancy		-	1	00 FOLE / 91
UNIT V	Analytical and Critical Reasoning	1			ours
	on Linear arrangement - Problems on Circular arrangement - I				
	on Selections - Problems on Comparisons - Finding the Implication				
	Negations for compound statements- Problems on assumption - I		nems	ions -	
Prootems (	on inferences - Problems on strengthening and weakening of argum		-4-1-	20 TT	
	R READING / CONTENT BEYOND SYLLABUS / SEMINAL	7.7	otai.	30 H	ours
FURTHE	K KEADING / CONTENT BETOND STELLABOS / SEMINAI				
REFERE!	NCES:				
	run Sharma, "How to Prepare for Quantitative Aptitude for the CA	Tet 7th edition	McG	raw H	fills
	iblication, 2016.	in , i cuitou,	TATELL	naw L	2013
2. At	run Sharma, "How to Prepare for Logical Reasoning for CAT", 4 <sup>th</sup>	edition, McGr	aw H	ills	
3. R	S Agarwal, "A modern approach to Logical reasoning", revised ed 117.	ATTESTED	publi	ication	1,
allo 3 manual		(4)	7		
	Dr. S. R	AMABALAN	, M.E.	Ph.D	
	rG) memerapenela	PRINCIPAL			
2	E.G.S.	Pillay Engineerin	g Coll	ege,	
	TL	added by the state of the		CALL COL	

Dr. S. RAMABALAN, M.E., Ph.D. PRINCIPAL E.G.S. Pillay Engineering College, Thethi, Nagore - 611 002.

1704CS653	INDUSTRIAL VISIT PRESENTATION	I	I	ы	C
	EMPLOYABILITY   ENTREPRENEURIHIP   SKILL DEVELOPMENT	0	0	0	-
A					
In order to provide ti	In order to provide the experiential learning to the students, shall take efforts to arrange at least two industrial	east to	o ind	ustria	1
visit / field visits in a	visit / field visits in a year. A presentation based on Industrial visits shall be made in this semester and suitable	mester	and and	detime	<u>a</u>
Count many on amazonesa					
	Internal Assessment Only				
	Test	40			
	Presentation / Quiz / Group Discussion	40			
	Report	20			
	Grades (Excellent / Good / Satisfactory / Not Satisfactory)				
Dr. S. F E.G.S.	7 1/11/2				

AMABALAN, M.E., Ph.D.,

PRINCIPAL

i.G.S. Fillay Engineering College,
Thethi, Nagore - 611 002.
Nages attinam (Dt) Tanni Wadu.

1702CS701	CRYPTOGRAPHY AND NETWORK SECURITY	L	T	P	C
		3	0	0	3
		-			
PREREQUI					
	Computer Networks				
0 01:	Basic knowledge of Number theory and finite field elements.				100
Course Obje		and the second			
	<ol> <li>To know the principles and methods of conventional and advanced algorithms.</li> </ol>				
	<ol><li>To learn the techniques used for message authentication and confidence.</li></ol>	entiali	ty mai	ntena	nce
	<ol> <li>To understand the network security tools and applications</li> </ol>				
			-	- 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.		-	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
		-			

Dr. S. RAMABALAN M.E., Ph.D.,
PRINCIPAL
EGS Pillay Engineering Collage.

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
Understanding P risks – risk analy Leadership style Project environn	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 sent – Hiring and firing issues in software project management –	er —	9 H	ours
Understanding P risks – risk analy Leadership style Project environn Communication	roject risk management process – risk management planning – identification sis – risk-response planning – Monitoring the risks – Role of project manage s – recruitment process – team development stages – Conflict management i lent – Hiring and firing issues in software project management – process	er —		
Understanding P risks – risk analy Leadership style Project environn Communication UNIT V	roject risk management process — risk management planning — identification sis — risk-response planning — Monitoring the risks — Role of project manage s — recruitment process — team development stages — Conflict management in tent — Hiring and firing issues in software project management — process ADVANCED TOPICS	er —		ours
Understanding Prisks – risk analy Leadership style Project environn Communication UNIT V Project schedulin	roject risk management process — risk management planning — identification sis — risk-response planning — Monitoring the risks — Role of project manage s — recruitment process — team development stages — Conflict management is nent — Hiring and firing issues in software project management — process  ADVANCED TOPICS  ig — Activity diagrams — Network diagrams — PERT & CPM for Schedule	er —		
Understanding Prisks – risk analy Leadership style Project environn Communication UNIT V Project schedulin development – S	roject risk management process — risk management planning — identification sis — risk-response planning — Monitoring the risks — Role of project manage s — recruitment process — team development stages — Conflict management in tent — Hiring and firing issues in software project management — process ADVANCED TOPICS ig — Activity diagrams — Network diagrams — PERT & CPM for Schedule chedule compression technique — Critical chain method — Software project	er —		
Understanding Prisks – risk analy Leadership style Project environn Communication UNIT V Project schedulin development – S scheduling tools	roject risk management process — risk management planning — identification sis — risk-response planning — Monitoring the risks — Role of project manage s — recruitment process — team development stages — Conflict management in tent — Hiring and firing issues in software project management — process ADVANCED TOPICS ig — Activity diagrams — Network diagrams — PERT & CPM for Schedule chedule compression technique — Critical chain method — Software project — Program - Project-Program-Portfolio relationships - Project portfolid —	er —		
Understanding Prisks – risk analy Leadership style Project environn Communication UNIT V Project schedulin development – S	roject risk management process — risk management planning — identification sis — risk-response planning — Monitoring the risks — Role of project manage s — recruitment process — team development stages — Conflict management in tent — Hiring and firing issues in software project management — process ADVANCED TOPICS ig — Activity diagrams — Network diagrams — PERT & CPM for Schedule chedule compression technique — Critical chain method — Software project — Program - Project-Program-Portfolio relationships - Project portfolid —	er —		
Understanding Prisks – risk analy Leadership style Project environm Communication UNIT V Project schedulin development – S scheduling tools Project Manager	roject risk management process — risk management planning — identification  sis — risk-response planning — Monitoring the risks — Role of project manages — recruitment process — team development stages — Conflict management is  nent — Hiring and firing issues in software project management —  process  ADVANCED TOPICS  ag — Activity diagrams — Network diagrams — PERT & CPM for Schedule  chedule compression technique — Critical chain method — Software project —  Program - Project-Program-Portfolio relationships —  Project portfolio —  nent Careers.  Total:	1	9 H	ours
Understanding Prisks – risk analy Leadership style Project environn Communication UNIT V Project schedulin development – S scheduling tools	roject risk management process — risk management planning — identification  sis — risk-response planning — Monitoring the risks — Role of project manages  — recruitment process — team development stages — Conflict management is  nent — Hiring and firing issues in software project management —  process  ADVANCED TOPICS  ig — Activity diagrams — Network diagrams — PERT & CPM for Schedule  chedule compression technique — Critical chain method — Software project  — Program - Project-Program-Portfolio relationships —  Project portfolio —  nent Careers.  Total:	1	9 H	ours
Understanding Prisks – risk analy Leadership style Project environm Communication UNIT V Project schedulin development – S scheduling tools Project Manager	roject risk management process — risk management planning — identification  sis — risk-response planning — Monitoring the risks — Role of project manages — recruitment process — team development stages — Conflict management is  nent — Hiring and firing issues in software project management —  process  ADVANCED TOPICS  ag — Activity diagrams — Network diagrams — PERT & CPM for Schedule  chedule compression technique — Critical chain method — Software project —  Program - Project-Program-Portfolio relationships —  Project portfolio —  nent Careers.  Total:  ADING:	AT AT	9 H 45 H 1ES	ours
Understanding Prisks – risk analy Leadership style Project environm Communication UNIT V Project schedulin development – S scheduling tools Project Manager	roject risk management process — risk management planning — identification sis — risk-response planning — Monitoring the risks — Role of project manages — recruitment process — team development stages — Conflict management is ment — Hiring and firing issues in software project management — process  ADVANCED TOPICS  ag — Activity diagrams — Network diagrams — PERT & CPM for Schedule chedule compression technique — Critical chain method — Software project — Program - Project-Program-Portfolio relationships — Project portfolio — nent Careers.  Total:  1. Import of the internet on project Management  2. Classification of Software Metrics	AT AT	9 H 45 H JES	ours TED
Understanding Prisks – risk analy Leadership style Project environm Communication UNIT V Project schedulin development – S scheduling tools Project Manager	roject risk management process — risk management planning — identification sis — risk-response planning — Monitoring the risks — Role of project manages — recruitment process — team development stages — Conflict management is ment — Hiring and firing issues in software project management — process  ADVANCED TOPICS  In a Compression technique — Critical chain method — Software project — Program — Project — Project Program — Project — Project portfolio — nent Careers.  Total:  1. Import of the internet on project Management  2. Classification of Software Metrics  COMES: EPARO YABILITY ENTREPRENEURSHIP Dr. S	AT RAM	9 H 45 H TES ABOUT	ours TED AN.
Understanding Prisks – risk analy Leadership style Project environm Communication UNIT V Project schedulin development – S scheduling tools Project Manager	roject risk management process — risk management planning — identification sis — risk-response planning — Monitoring the risks — Role of project management is — recruitment process — team development stages — Conflict management is ment — Hiring and firing issues in software project management — process  ADVANCED TOPICS  Ig — Activity diagrams — Network diagrams — PERT & CPM for Schedule chedule compression technique — Critical chain method — Software project — Program — Project-Program-Portfolio relationships — Project portfolio — ment Careers.  Total:  ADING:  1. Import of the internet on project Management  2. Classification of Software Metrics  COMES: EMAGYABILITY ENTREPRENEURSHIP Dr. S.  After completion of the course, Student will be able to	AT AT RAM	9 H	AN.
Understanding Prisks – risk analy Leadership style Project environm Communication UNIT V Project schedulin development – S scheduling tools Project Manager FURTHER RE COURSE OUT	roject risk management process — risk management planning — identification sis — risk-response planning — Monitoring the risks — Role of project management is — recruitment process — team development stages — Conflict management is ment — Hiring and firing issues in software project management — process  ADVANCED TOPICS  Ig — Activity diagrams — Network diagrams — PERT & CPM for Schedule chedule compression technique — Critical chain method — Software project — Program — Project-Program-Portfolio relationships — Project portfolio — nent Careers.  Total:  ADING:  1. Import of the internet on project Management  2. Classification of Software Metrics  COMES: EMAGMANILITY ENTREPRENEURS — Dr. S. After completion of the course, Student will be able to Identify and build an appropriate process model for a given project	AT RAM P.S. Pilla	9 H	AN.
Inderstanding Prisks – risk analy Leadership style Project environm Communication UNIT V Project scheduling tools Project Manager FURTHER RE-	roject risk management process — risk management planning — identification sis — risk-response planning — Monitoring the risks — Role of project management is — recruitment process — team development stages — Conflict management is ment — Hiring and firing issues in software project management — process  ADVANCED TOPICS  Ig — Activity diagrams — Network diagrams — PERT & CPM for Schedule chedule compression technique — Critical chain method — Software project — Program — Project-Program-Portfolio relationships — Project portfolio — ment Careers.  Total:  ADING:  1. Import of the internet on project Management  2. Classification of Software Metrics  COMES: EMAROYABULTY ENTREPRENEURSHIP Dr.S  After completion of the course, Student will be able to Identify and build an appropriate process model for a given project  Analyse the principles at various phases of software development	RAM P.S. Pilla Thethi agapatti	9 H 45 H IES RINCI PENGIN	AN. IPAL neering
Understanding Prisks – risk analy Leadership style Project environm Communication UNIT V Project schedulin development – S scheduling tools Project Manager  FURTHER RE  COURSE OUT	Total:  ADING:  1. Import of the internet on project Management 2. Classification of Software Metrics  1. Import of the internet on project Management 2. Classification of Software Metrics  COMES: EMARO YARDITY ENTREPRENEURS HE Component  After completion of the course, Student will be able to  Identify and build an appropriate process model for a given project  Analyse the principles at various phases of software development  Translate specifications into design, and identify the components to build to the suppoper to the project of the components to build to the components to the component to the component to the components to the components to the component	RAM P S. Pilla Thethi agapatithe arch	9 H 45 H IES RINCI PENGIN	AN. IPAL neering
Understanding Prisks – risk analy Leadership style Project environm Communication UNIT V Project schedulin development – S scheduling tools Project Manager  FURTHER RE  COURSE OUT  CO1 CO2	Total:  ADING:  1. Import of the internet on project Management 2. Classification of Software Metrics  1. Import of the internet on project Management 2. Classification of Software Metrics  COMES: EMANOYARDITY ENTREPRENEURIALP  After completion of the course, Student will be able to  Identify and build an appropriate process model for a given project  Analyse the principles at various phases of software development  Translate specifications into design, and identify the components to build to a given problem, all using an appropriate software engineering methodologies.	RAM P S. Pilla Thethi agapatt he arch	9 H	AN. IPAL neeringe - 61° ot) Tan e for
Understanding Prisks – risk analy Leadership style Project environm Communication UNIT V Project schedulin development – S scheduling tools Project Manager  FURTHER RE  COURSE OUT  CO1 CO2	Total:  ADING:  1. Import of the internet on project Management  2. Classification of Software Metrics  COMES: EAROYANGEDTY ENTREPRENEURLED  After completion of the course, Student will be able to  Identify and build an appropriate process model for a given project  Analyse the principles at various phases of software development  Translate specifications into design, and identify the components to build to a given problem, all using an appropriate software engineering methodolog Define a Project Management Testing Pians	RAM P S. Pilla Thethi agapatt he arch	9 H	AN. IPAL neeringe - 61° ot) Tan e for
Understanding Prisks – risk analy Leadership style Project environm Communication UNIT V Project schedulin development – S scheduling tools Project Manager  FURTHER RE  COURSE OUT  CO1  CO2  CO3	Total:  1. Import of the internet on project Management 2. Classification of Software Metrics  1. Import of the internet on project Management 2. Classification of Software Metrics  COMES: EMANOSCIOUS Software Metrics  1. Import of the internet on project Management  2. Classification of Software Metrics  COMES: EMANOSCIOUS Software Metrics  COMES: EMANOSCIOUS Software Metrics  Comes Sof	RAM Pas. Pilla Thethi agapatti he arch	9 H 45 H RINCI Nagor inam (Contectum	AN. IPAL neeringe - 61° ot) Tan e for
Understanding Prisks – risk analy Leadership style Project environm Communication UNIT V Project schedulin development – S scheduling tools Project Manager  FURTHER RE  COURSE OUT  CO1  CO2  CO3	roject risk management process — risk management planning — identification sis — risk-response planning — Monitoring the risks — Role of project management is — recruitment process — team development stages — Conflict management is ident — Hiring and firing issues in software project management — process  ADVANCED TOPICS  Ig — Activity diagrams — Network diagrams — PERT & CPM for Schedule chedule compression technique — Critical chain method — Software project — Program - Project-Program-Portfolio relationships — Project portfolio — nent Careers.  Total:  1. Import of the internet on project Management  2. Classification of Software Metrics  COMES: ENAROYABULTY ENTREPRENEURSHAP Dr. Schedule the completion of the course, Student will be able to Identify and build an appropriate process model for a given project Analyse the principles at various phases of software development Translate specifications into design, and identify the components to build a given problem, all using an appropriate software engineering methodolog Define a Project Management Plan and tabulate appropriate Testing Plans during the development of the software  Understand the software project estimation models and estimate the work to the software of the software of the software work to the software project estimation models and estimate the work to the software project estimation models and estimate the work to the software project estimation models and estimate the work to the software project estimation models and estimate the work to the software project estimation models and estimate the work to the software project estimation models and estimate the work to the software project estimation models and estimate the work to the software project estimation models and estimate the work to the software project estimation models and estimate the work to the software project estimation models and estimate the work to the software project estimates the work to the software project estimates the software project estimates the software project esti	RAM Pas. Pilla Thethi agapatti he arch	9 H 45 H RINCI Nagor inam (Contectum	AN. IPAL neeringe - 61° ot) Tan e for
Understanding Prisks – risk analy Leadership style Project environm Communication UNIT V Project schedulin development – S scheduling tools Project Manager  FURTHER RE  COURSE OUT  CO1  CO2  CO3	Total:  1. Import of the internet on project Management 2. Classification of Software Metrics  COMES: EPARO Y BULLTY ENTREPRENEURSHIP  After completion of the course, Student will be able to  Identify and build an appropriate process model for a given project  Analyse the principles at various phases of software development  Translate specifications into design, and identify the components to build to a given problem, all using an appropriate software engineering methodolog Define a Project Management Plan and tabulate appropriate Testing Plans during the development of the software  Understand the software project estimation models and estimate the work to resources required and the schedule for a software project  Understand the software project estimation models and estimate the work to resources required and the schedule for a software project  Understand the software project estimation models and estimate the work to resources required and the schedule for a software project	RAM Pas. Pilla Thethi agapatti he arch	9 H 45 H RINCI Nagor inam (Contectum	AN. IPAL neeringe - 61° ot) Tan e for

1702CS703	BIG DATA ANALYTICS	L 3	T 0	P 0	3
PREREQUISITE	Database management Systems	1 3	10	1 0	3
COURSE OBJEC					
	Be exposed to big data	distantia	il ec		Jier
	Learn the different ways of Data Analysis				
	Learn the mining and clustering		116		
	Be familiar with the data streams and visualization				
UNIT I	INTRODUCTION TO BIG DATA			9 H	our
scalability, analyti	g Data Platform – Challenges of conventional systems – Web data c processes and tools, Analysis vs reporting – Modern data analytic tools, resampling, statistical inference, prediction error.				
UNIT II	DATA ANALYSIS			9 H	our
induction – Neura and neural netwo methods.	methods, Analysis of time series: linear systems analysis, nonl l networks: learning and generalization, competitive learning, princi ks; Fuzzy logic: extracting fuzzy models from data, fuzzy decision	ipal com	pone	nt ana stic se	lysi: arcl
UNIT III	MINING DATA STREAMS			9 H	our
	t analysis, stock market predictions.	ications	-		
UNIT IV Mining Frequent	FREQUENT ITEMSETS AND CLUSTERING itemsets - Market based model - Apriori Algorithm - Handling	large da	ta set	9 H	our
UNIT IV Mining Frequent memory – Limite Hierarchical – K-	FREQUENT ITEMSETS AND CLUSTERING itemsets - Market based model - Apriori Algorithm - Handling ed Pass algorithm - Counting frequent itemsets in a stream - C Means - Clustering high dimensional data - CLIQUE and PROC	large da Insterina LUS — I	ta set	9 H es in l hniquent pa	our Mai
UNIT IV Mining Frequent memory – Limite Hierarchical – K- based clustering n	FREQUENT ITEMSETS AND CLUSTERING itemsets - Market based model - Apriori Algorithm - Handling ed Pass algorithm - Counting frequent itemsets in a stream - C Means - Clustering high dimensional data - CLIQUE and PROC ethods - Clustering in non-euclidean space - Clustering for streams	large da Insterina LUS — I	ta set	9 H s in l hniquent pa m.	our Mai es - tten
UNIT IV Mining Frequent memory – Limite Hierarchical – K- based clustering n UNIT V	FREQUENT ITEMSETS AND CLUSTERING itemsets - Market based model - Apriori Algorithm - Handling ad Pass algorithm - Counting frequent itemsets in a stream - C Means - Clustering high dimensional data - CLIQUE and PROC methods - Clustering in non-euclidean space - Clustering for streams FRAMEWORKS AND VISUALIZATION	large da Insterina LUS – I and Para	ta sei g Teo requi	9 H es in l ent pa m. 9 H	our Vfair es - tten
UNIT IV Mining Frequent memory – Limite Hierarchical – K- based clustering n UNIT V MapReduce – Hac	FREQUENT ITEMSETS AND CLUSTERING itemsets - Market based model - Apriori Algorithm - Handling ed Pass algorithm - Counting frequent itemsets in a stream - C Means - Clustering high dimensional data - CLIQUE and PROC ethods - Clustering in non-euclidean space - Clustering for streams	large da lusterina LUS – I and Para	ta set	9 H es in l ent pa m. 9 H	our Mai es tten
UNIT IV Mining Frequent memory — Limite Hierarchical — K- based clustering in UNIT V MapReduce — Had Visualizations — V	FREQUENT ITEMSETS AND CLUSTERING itemsets — Market based model — Apriori Algorithm — Handling ed Pass algorithm — Counting frequent itemsets in a stream — C Means — Clustering high dimensional data — CLIQUE and PROC methods — Clustering in non-euclidean space — Clustering for streams FRAMEWORKS AND VISUALIZATION loop, Hive, MapR — Sharding — NoSQL Databases — S3 — Hadoop Di isual data analysis techniques, interaction techniques; Systems and a	large da lusterina LUS – I and Para	ta ser Tecurrequiallelis	9 H es in l ent pa m. 9 H	our Mais es - tten our
UNIT IV Mining Frequent memory — Limite Hierarchical — K- based clustering n UNIT V MapReduce — Hac	FREQUENT ITEMSETS AND CLUSTERING itemsets - Market based model - Apriori Algorithm - Handling ed Pass algorithm - Counting frequent itemsets in a stream - C Means - Clustering high dimensional data - CLIQUE and PROC methods - Clustering in non-euclidean space - Clustering for streams FRAMEWORKS AND VISUALIZATION doop, Hive, MapR - Sharding - NoSQL Databases - S3 - Hadoop Di isual data analysis techniques, interaction techniques; Systems and a DING:	large da Insterina LUS – I and Para stributed	ta ser Tecurrequiallelis	9 H deniquent pa m. 9 H	our Mair es - tten our
UNIT IV Mining Frequent memory — Limite Hierarchical — K- based clustering n UNIT V MapReduce — Had Visualizations — V	FREQUENT ITEMSETS AND CLUSTERING itemsets - Market based model - Apriori Algorithm - Handling ed Pass algorithm - Counting frequent itemsets in a stream - C Means - Clustering high dimensional data - CLIQUE and PROC methods - Clustering in non-euclidean space - Clustering for streams FRAMEWORKS AND VISUALIZATION loop, Hive, MapR - Sharding - NoSQL Databases - S3 - Hadoop Di isual data analysis techniques, interaction techniques; Systems and a DING:  1. Analyzing big data with twitter	large da Insterina LUS – I and Para stributed	ta ser Tecurrequiallelis	9 H deniquent pa m. 9 H	our Maines es - tten our
UNIT IV Mining Frequent memory — Limite Hierarchical — K- based clustering in UNIT V MapReduce — Had Visualizations — V	itemsets - Market based model - Apriori Algorithm - Handling ed Pass algorithm - Counting frequent itemsets in a stream - Counting high dimensional data - CLIQUE and PROCOUNTING - Chustering in non-euclidean space - Chustering for streams FRAMEWORKS AND VISUALIZATION    loop, Hive, MapR - Sharding - NoSQL Databases - S3 - Hadoop Dissual data analysis techniques, interaction techniques; Systems and a DING:  1. Analyzing big data with twitter  2. Big data for Ecommerce and Big data for blogs	large da Insterina LUS – I and Para stributed	ta ser Tecurrequiallelis	9 H deniquent pa m. 9 H	our Mair es - tten our
UNIT IV Mining Frequent memory — Limite Hierarchical — K- based clustering in UNIT V MapReduce — Had Visualizations — V	FREQUENT ITEMSETS AND CLUSTERING itemsets - Market based model - Apriori Algorithm - Handling ed Pass algorithm - Counting frequent itemsets in a stream - Counting - Chustering high dimensional data - CLIQUE and PROCOUNTING - Chustering in non-euclidean space - Chustering for streams FRAMEWORKS AND VISUALIZATION isual data analysis techniques, interaction techniques; Systems and a COUNTING:  1. Analyzing big data with twitter 2. Big data for Ecommerce and Big data for blogs OMES: EMPOYABILITY	large da Insterina LUS – I and Para stributed	ta ser Tecurrequi illelis	9 H deniquent pa m. 9 H	our Mais es - tten our
UNIT IV Mining Frequent memory – Limite Hierarchical – K- based clustering n UNIT V MapReduce – Had Visualizations – V	FREQUENT ITEMSETS AND CLUSTERING itemsets — Market based model — Apriori Algorithm — Handling ed Pass algorithm — Counting frequent itemsets in a stream — C Means — Clustering high dimensional data — CLIQUE and PROC methods — Clustering in non-euclidean space — Clustering for streams FRAMEWORKS AND VISUALIZATION doop, Hive, MapR — Sharding — NoSQL Databases — S3 — Hadoop Di isual data analysis techniques, interaction techniques; Systems and a  DING:  1. Analyzing big data with twitter 2. Big data for Ecommerce and Big data for blogs  OMES: ENVOYAGIOUNY After completion of the course, Student will be able to	large da Insterina LUS – I and Para stributed	ta ser Tecurrequi illelis	9 H deniquent pa m. 9 H	our Mai es tten our
UNIT IV Mining Frequent memory — Limite Hierarchical — K- based clustering n UNIT V MapReduce — Had Visualizations — V FURTHER REA	FREQUENT ITEMSETS AND CLUSTERING  itemsets — Market based model — Apriori Algorithm — Handling and Pass algorithm — Counting frequent itemsets in a stream — Counting high dimensional data — CLIQUE and PROCOUNT — Chustering in non-euclidean space — Chustering for streams — FRAMEWORKS AND VISUALIZATION —  loop, Hive, MapR — Sharding — NoSQL Databases — S3 — Hadoop Different data analysis techniques, interaction techniques; Systems and a — CDING:  1. Analyzing big data with twitter  2. Big data for Ecommerce and Big data for blogs  OMES: ENVOYAGILATY  After completion of the course, Student will be able to Apply the statistical analysis methods.	large da Insterina LUS – I and Para stributed	ta ser Tecurrequi illelis	9 H deniquent pa m. 9 H	our Mais es - tten our
UNIT IV Mining Frequent memory — Limite Hierarchical — K- based clustering n UNIT V MapReduce — Hac Visualizations — V FURTHER REA  COURSE OUTC  COL CO2	FREQUENT ITEMSETS AND CLUSTERING itemsets — Market based model — Apriori Algorithm — Handling ed Pass algorithm — Counting frequent itemsets in a stream — Counting frequent itemsets in a stream — Countering high dimensional data — CLIQUE and PROCE methods — Clustering in non-euclidean space — Clustering for streams FRAMEWORKS AND VISUALIZATION loop, Hive, MapR — Sharding — NoSQL Databases — S3 — Hadoop Dr isual data analysis techniques, interaction techniques; Systems and a  DING:  1. Analyzing big data with twitter  2. Big data for Ecommerce and Big data for blogs  OMES: Englogy (S) (C) (S) After completion of the course, Student will be able to Apply the statistical analysis methods.  Compare and contrast various soft computing frameworks	large da lusterina LUS – I and Para stributed pplication Total:	ta set g Tec requi illelis d file	9 H deniquent pa m. 9 H	our Mais es - tten our
UNIT IV Mining Frequent memory – Limite Hierarchical – K- based clustering n UNIT V MapReduce – Had Visualizations – V FURTHER REA  COURSE OUTC  COI CO2 CO3	itemsets — Market based model — Apriori Algorithm — Handling and Pass algorithm — Counting frequent itemsets in a stream — Comethods — Clustering high dimensional data — CLIQUE and PROCE atthods — Clustering in non-euclidean space — Clustering for streams FRAMEWORKS AND VISUALIZATION aloop, Hive, MapR — Sharding — NoSQL Databases — S3 — Hadoop Dissual data analysis techniques, interaction techniques; Systems and a DING:  1. Analyzing big data with twitter 2. Big data for Ecommerce and Big data for blogs  OMES: Engloyers (STO)  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 Insterina LUS – I and Para stributed	ta set g Tec requi illelis d file	9 H deniquent pa m. 9 H	our Mais es - tten our
UNIT IV Mining Frequent memory – Limite Hierarchical – K- based clustering n UNIT V MapReduce – Had Visualizations – V FURTHER REA  COURSE OUTC  CO1 CO2 CO3 CO4	itemsets — Market based model — Apriori Algorithm — Handling of Pass algorithm — Counting frequent itemsets in a stream — Counting high dimensional data — CLIQUE and PROCOUNTS — Chustering in non-euclidean space — Chustering for streams FRAMEWORKS AND VISUALIZATION —  ioop, Hive, MapR — Sharding — NoSQL Databases — S3 — Hadoop Dissual data analysis techniques, interaction techniques; Systems and a stream — DING:  1. Analyzing big data with twitter  2. Big data for Ecommerce and Big data for blogs OMES: PAROYA O ICAMY  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  AT Apply Stream data model.	large da lusterina LUS – I and Para stributed pplication Total:	ta set g Tec requi illelis d file	9 H deniquent pa m. 9 H	our Mai es tten our
UNIT IV Mining Frequent memory — Limite Hierarchical — K- based clustering in UNIT V MapReduce — Had Visualizations — V  FURTHER REA  COURSE OUTC  COI CO2 CO3 CO4 CO5	FREQUENT ITEMSETS AND CLUSTERING  itemsets — Market based model — Apriori Algorithm — Handling and Pass algorithm — Counting frequent itemsets in a stream — Counting high dimensional data — CLIQUE and PROCE methods — Clustering in non-euclidean space — Clustering for streams  FRAMEWORKS AND VISUALIZATION  loop, Hive, MapR — Sharding — NoSQL Databases — S3 — Hadoop Dissual data analysis techniques, interaction techniques; Systems and a signal data analysis techniques, interaction techniques; Systems and a signal data for Ecommerce and Big data for blogs  OMES: Engloyer (STO)  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  Apply Stream data model.	large da lusterina LUS – I and Para stributed pplicatio	ta set g Tec Frequiallelis	9 H s in 1 hniquent pa m. 9 H system	our Mai es tten our our
UNIT IV Mining Frequent memory – Limite Hierarchical – K- based clustering n UNIT V MapReduce – Had Visualizations – V  FURTHER REA  COURSE OUTC  CO1  CO2  CO3  CO4  CO5	itemsets — Market based model — Apriori Algorithm — Handling of Pass algorithm — Counting frequent itemsets in a stream — Counting high dimensional data — CLIQUE and PROCOUNTS — Chustering in non-euclidean space — Chustering for streams FRAMEWORKS AND VISUALIZATION —  ioop, Hive, MapR — Sharding — NoSQL Databases — S3 — Hadoop Dissual data analysis techniques, interaction techniques; Systems and a stream — DING:  1. Analyzing big data with twitter  2. Big data for Ecommerce and Big data for blogs OMES: PAROYA O ICAMY  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  AT Apply Stream data model.	large da lusterina LUS – I and Para stributed pplication Total:	ta set required lielis	9 H s in 1 hniquent pa m. 9 H system	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			1	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	on in		T. 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	,
<ol><li>Rajku</li></ol>	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 cases. Focus on	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 Ideistand 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 F	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:				
<ol> <li>Peter S. Pacheco, "An Introduction to Parallel Programming", Morgan-Kauffman/Elsevie</li> </ol>		4	05	
<ol> <li>Darryl Gove, "Multicore Application Programming for Windows, Linux, and Oracle Solar Pearson, 2011</li> </ol>		,		
3. John L. Hennessey and David A. Patterson, "Computer Architecture - A Quantitative TED	~	1		
Approach", Morgan Kaufinann / Elsevier, 5th edition, 2012.	1	7		

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					
	<ol><li>Be familia</li></ol>	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	
<ol><li>Find p</li></ol>		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.		1515	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					531
	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 TAXABLE PARTY.		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				
<ol><li>Demonstra signatures</li></ol>	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:				
	<ol> <li>Configure SSH (Secure Shell) and send/receive a file on this concorrectness of this system using the configured parameters.</li> </ol>	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	<ol><li>Gain practical experience of designing and implementing network se</li></ol>	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:		
	<ol> <li>To highlight the importance of Software Development and design and its limitations</li> </ol>	Innitatio	ns
	<ol><li>To show how we apply the process of software development.</li></ol>		
	<ol><li>To provide the necessary knowledge and skills in using Software Development Tools.</li></ol>	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:		
	<ol> <li>More Project Development and Testing.</li> </ol>		+
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 MIN. W.C.		

1704GE751	LIFE SKILLS: COMPETITE PREPARATION		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	<ul> <li>Sorting - Asymptotic worst case time</li> <li>ogramming</li> </ul>	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

PRINCIPAL

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
		псе		-	
	The state of the s		_		
TTZe T	To let the students know the Sequence alignments		- 1	0.77	
Unit I	GENOMICS Project Person Project Projec	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	W. 11000 1-210			ours
	Protein sequences, physicochemical properties based on sequence, sequence				
THE RESERVE AND DESCRIPTION OF THE PERSON NAMED IN	nment, gaps, gap-penalties, scoring matrices, Smith-Waterman and Needlems			1	
Contract to the second	alignments, multiple sequence alignment, comparision, composition a		CONTRACTOR OF THE		
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	1.00.0000	OULS
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	tai:	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 BLITY				
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.

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					_
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
Overview of	Business Con	tinuity in Virtualized Data Center, Fault Tolerance	Mechanism	in V	irtual	ized !	
Overview of Center, Backt	Business Con un and Recove	tinuity in Virtualized Data Center, Fault Tolerance are of Virtual Machines (VMs). VM Renlication and	Mechanism	in V	irtual	lized l	Data
Overview of Center, Backt Unit V	Business Con up and Recove CLOUD IN	tinuity in Virtualized Data Center, Fault Tolerance ory of Virtual Machines (VMs). VM Replication and FRASTRUCTURE AND MANAGEMENT	Mechanism Migration T	echno	ologie	ized : s. 9 H	Data
Overview of Center, Backs Unit V Cloud Compu of Cloud, Cl	Business Con un and Recove CLOUD IN ating Primer, Coud Infrastru-	tinuity in Virtualized Data Center, Fault Tolerance or of Virtual Machines (VMs). VM Renlication and FRASTRUCTURE AND MANAGEMENT Diverview of Cloud Computing, Cloud Services and leture Framework, Infrastructure Management and	Mechanism Migration T Deployment	Mod	els, E	9 H	Data ours mics
Overview of Center, Backs Unit V Cloud Compu of Cloud, Cl	Business Con un and Recove CLOUD IN ating Primer, Coud Infrastru-	tinuity in Virtualized Data Center, Fault Tolerance or of Virtual Machines (VMs). VM Replication and FRASTRUCTURE AND MANAGEMENT Overview of Cloud Computing, Cloud Services and	Mechanism Migration T Deployment Service Cre	Mod eation	els, E	9 H cono	Data ours mics loud
Overview of Center, Backt Unit V Cloud Compt of Cloud, Cl Service Mana	Business Con un and Recove CLOUD IN ating Primer, Coud Joud Infrastru- agement, Cloud	tinuity in Virtualized Data Center, Fault Tolerance or of Virtual Machines (VMs). VM Renlication and FRASTRUCTURE AND MANAGEMENT Diverview of Cloud Computing, Cloud Services and leture Framework, Infrastructure Management and	Mechanism Migration T Deployment	Mod eation	els, E	9 H	Data ours mics loud
Overview of Center, Backt Unit V Cloud Compt of Cloud, Cl Service Mana	Business Con un and Recove CLOUD IN iting Primer, Coud Infrastru- agement, Clou- ding:	tinuity in Virtualized Data Center, Fault Tolerance or of Virtual Machines (VMs). VM Replication and FRASTRUCTURE AND MANAGEMENT Diverview of Cloud Computing, Cloud Services and I cture Framework, Infrastructure Management and Migration Considerations	Mechanism Migration T Deployment Service Cre Tota	Mod eation	els, E	9 H conords, C	Data ours mics loud
Overview of Center, Backt Unit V Cloud Compt of Cloud, Cl Service Mana Further Read	Business Con un and Recove CLOUD IN ating Primer, Coud Infrastru- igement, Cloud ding: Cloud evolu	tinuity in Virtualized Data Center, Fault Tolerance of Virtual Machines (VMs). VM Replication and FRASTRUCTURE AND MANAGEMENT Overview of Cloud Computing, Cloud Services and cture Framework, Infrastructure Management and Migration Considerations	Mechanism Migration T Deployment Service Cre Tota	Mod eation	els, E	9 H conords, C	Data ours mics loud
Overview of Center, Backt Unit V Cloud Compt of Cloud, Cl Service Mana Further Read	Business Con un and Recove CLOUD IN ating Primer, Could Infrastructure agement, Cloud ding: Cloud evolu- omes:	tinuity in Virtualized Data Center, Fault Tolerance or of Virtual Machines (VMs). VM Replication and FRASTRUCTURE AND MANAGEMENT Diverview of Cloud Computing, Cloud Services and I cture Framework, Infrastructure Management and Migration Considerations  tion-VMware Virtualization Tools- Google Infrastructure Management and Migration Considerations	Mechanism Migration T Deployment Service Cre Tota	Mod eation	els, E	9 H conords, C	Data ours mics loud
Overview of Center, Backt Unit V Cloud Compt of Cloud, Cl Service Mana Further Read Course Outc	Business Con un and Recove CLOUD IN iting Primer, Coud Infrastru- agement, Cloud ding: Cloud evolu- omes:	tinuity in Virtualized Data Center, Fault Tolerance or of Virtual Machines (VMs). VM Renlication and FRASTRUCTURE AND MANAGEMENT Diverview of Cloud Computing, Cloud Services and I cture Framework, Infrastructure Management and Migration Considerations  tion-VMware Virtualization Tools- Google Infrastructure Management and Computing Computing Computing Computing Computing Computing Cloud Services and I computed the Computing Computin	Mechanism Migration T Deployment Service Cre Tota	Mod eation	els, E	9 H conords, C	ours mics loud
Overview of Center, Backt Unit V Cloud Compu of Cloud, Cl Service Mana Further Read Course Outc	Business Con un and Recove CLOUD IN uting Primer, Cloud Infrastruct gement, Cloud ding: Cloud evolut omes: After comple Explore the	tinuity in Virtualized Data Center, Fault Tolerance are of Virtual Machines (VMs). VM Renlication and FRASTRUCTURE AND MANAGEMENT Overview of Cloud Computing, Cloud Services and acture Framework, Infrastructure Management and Migration Considerations  tion-VMware Virtualization Tools-Google Infrastructure Management and Migration Considerations	Mechanism Migration T Deployment Service Cre Tota	Mod eation	els, E	9 H conords, C	Data ours mics loud
Overview of Center, Backt Unit V Cloud Compt of Cloud, Cl Service Mana Further Read Course Outco	Business Con un and Recove CLOUD IN uting Primer, Cloud Infrastru- igement, Cloud ding: Cloud evolu- omes: After comple Explore the Explain the	tinuity in Virtualized Data Center, Fault Tolerance are of Virtual Machines (VMs). VM Renlication and FRASTRUCTURE AND MANAGEMENT Described of Cloud Computing, Cloud Services and Ceture Framework, Infrastructure Management and Migration Considerations  tion-VMware Virtualization Tools-Google Infrastructure Management and Migration of the course, Student will be able to basics of cloud computing.  Classic Data Center and its applications.	Mechanism Migration T Deployment Service Cre Tota	Mod eation	els, E	9 H conords, C	Data ours mics loud
Overview of Center, Backt Unit V Cloud Compt of Cloud, Cl Service Mana Further Read Course Outc CO1 CO2 CO3	Business Con un and Recove CLOUD IN ating Primer, Could Infrastru- igement, Cloud ding: Cloud evolu- omes: After comple Explore the Build a virtu	tinuity in Virtualized Data Center, Fault Tolerance or of Virtual Machines (VMs). VM Renlication and FRASTRUCTURE AND MANAGEMENT Diverview of Cloud Computing, Cloud Services and I cture Framework, Infrastructure Management and Migration Considerations  tion-VMware Virtualization Tools- Google Infrastructure Management and Migration of the course, Student will be able to basics of cloud computing.  Classic Data Center and its applications.  alized Data Center using cloud.	Mechanism Migration T Deployment Service Cre Tota	Mod eation	els, E	9 H conords, C	Data ours mics loud
Overview of Center, Backt Unit V Cloud Computor Cloud, Cl Service Mana Further React Course Outcottle CO1 CO2 CO3 CO4	Business Con un and Recove CLOUD IN uting Primer, Cloud Infrastruct gement, Cloud ding: Cloud evolut omes: After comple Explore the Build a virtu Manage the	tinuity in Virtualized Data Center, Fault Tolerance are of Virtual Machines (VMs). VM Renlication and FRASTRUCTURE AND MANAGEMENT Diverview of Cloud Computing, Cloud Services and cture Framework, Infrastructure Management and Migration Considerations  tion-VMware Virtualization Tools- Google Infrastructure Management and EMPLOYABILATY etion of the course, Student will be able to basics of cloud computing. Classic Data Center and its applications. alized Data Center using cloud. Cloud infrastructure and services.	Mechanism Migration T Deployment Service Cre Tota	Mod eation	els, E	9 H conords, C	Data our: mic: loud
Overview of Center, Backt Unit V Cloud Compt of Cloud, Cl Service Mana Further Reac Course Outc  CO1  CO2  CO3  CO4  CO5	Business Con un and Recove CLOUD IN uting Primer, Cloud Infrastruct gement, Cloud ding: Cloud evolut omes: After comple Explore the Build a virtu Manage the	tinuity in Virtualized Data Center, Fault Tolerance or of Virtual Machines (VMs). VM Renlication and FRASTRUCTURE AND MANAGEMENT Diverview of Cloud Computing, Cloud Services and I cture Framework, Infrastructure Management and Migration Considerations  tion-VMware Virtualization Tools- Google Infrastructure Management and Migration of the course, Student will be able to basics of cloud computing.  Classic Data Center and its applications.  alized Data Center using cloud.	Mechanism Migration T Deployment Service Cre Tota	Mod eation	els, E	9 H conords, C	Data our: mic: loud
Overview of Center, Backt Unit V Cloud Compt of Cloud, Cl Service Mana Further React Course Outco  CO1  CO2  CO3  CO4  CO5  References:	Business Con un and Recove CLOUD IN ating Primer, Cloud Infrastru- igement, Cloud ding: Cloud evolu- omes: After comple Explore the Build a virtu Manage the Demonstrate	tinuity in Virtualized Data Center, Fault Tolerance are of Virtual Machines (VMs). VM Renlication and FRASTRUCTURE AND MANAGEMENT Described of Cloud Computing, Cloud Services and Ceture Framework, Infrastructure Management and Migration Considerations  tion-VMware Virtualization Tools-Google Infrastructure of the course, Student will be able to basics of cloud computing.  Classic Data Center and its applications.  alized Data Center using cloud.  Cloud infrastructure and services.	Mechanism Migration T Deployment Service Cre Tota	Mod eation	els, E	9 H conords, C	our: mic: loud
Overview of Center, Backt Unit V Cloud Compt of Cloud, Cl Service Mana Further Reac Course Outc  CO1 CO2 CO3 CO4 CO5 References: 1. Cloud	Business Con un and Recove CLOUD IN uting Primer, Cloud Infrastructure gement, Cloud ding: Cloud evolut omes: After comple Explore the Explain the Cloud a virtu Manage the Demonstrate d Infrastructur	tinuity in Virtualized Data Center, Fault Tolerance or of Virtual Machines (VMs). VM Renlication and FRASTRUCTURE AND MANAGEMENT Diverview of Cloud Computing, Cloud Services and I cture Framework, Infrastructure Management and Migration Considerations  tion-VMware Virtualization Tools- Google Infrastructure of the course, Student will be able to basics of cloud computing.  Classic Data Center and its applications.  alized Data Center using cloud.  Cloud infrastructure and services.  the Cloud Migration Considerations  e and Services EMC2 Bangalore Book	Mechanism Migration T  Deployment Service Cre  Tota  cture- Googl	Mod eation al:	els, E	9 H conords, C	our: mic: loud
Overview of Center, Backt Unit V Cloud Compt of Cloud, Cl Service Mana Further Read Course Outc  CO1 CO2 CO3 CO4 CO5 References: 1. Cloud 2. Antho 3. Halpe	Business Con un and Recove CLOUD IN uting Primer, Cloud Infrastrus agement, Cloud ding: Cloud evolut omes: After comple Explore the Explain the Cloud a virtu Manage the Demonstrate d Infrastructur ony T Velte, Con	tinuity in Virtualized Data Center, Fault Tolerance are of Virtual Machines (VMs). VM Renlication and FRASTRUCTURE AND MANAGEMENT Described of Cloud Computing, Cloud Services and Ceture Framework, Infrastructure Management and Migration Considerations  tion-VMware Virtualization Tools-Google Infrastructure of the course, Student will be able to basics of cloud computing.  Classic Data Center and its applications.  alized Data Center using cloud.  Cloud infrastructure and services.	Mechanism Migration T Deployment Service Cre Tota cture- Googl	Modeation	els, En Too	9 H cono ols, C 45 H	Data our: mic- louc

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

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	
multi – relatio Unit IV understanding	munities soci nal characteri Speculation and predictir	al network infrastructures and communities — decentralized zation of dynamic social network communities.  of human behavior  ng human behavior for social communities — user data man	online so	cial n	9 Herence	ks our
multi – relation Unit IV understanding distribution – networks – transitivity ar spectrum and	munities soci mal characteri Speculation and predictir enabling new ust in online e alysis — comi countermeasu	al network infrastructures and communities — decentralized zation of dynamic social network communities.  of human behavior  ng human behavior for social communities — user data man human experiences — reality mining — context — awareness environment — trust models based on subjective logic — trust bining trust and reputation — trust derivation based on trustes.	agement - privacy t network	- infe	9 Herence line so rsis – s – at	ks our an ocia trus taci
multi – relation Unit IV understanding distribution – networks – to transitivity ar spectrum and Unit V	munities soci mal characteri Speculation and predictir enabling new ust in online e alysis — com- countermeasu Application	al network infrastructures and communities — decentralized zation of dynamic social network communities.  of human behavior  og human behavior for social communities — user data man human experiences — reality mining — context — awareness environment — trust models based on subjective logic — trust bining trust and reputation — trust derivation based on trustes.	agement - privacy t network ust compa	- infe in on analy	9 Horrence line so rsis – s – at	ks - our and cia trus tacl
multi – relation Unit IV understanding distribution – networks – tra transitivity ar spectrum and Unit V graph theory networks, vis hybrid repres	speculation can predictive enabling new ust in online enablysis — comicountermeasu Application — centrality — ualizing social entations — applications — app	al network infrastructures and communities – decentralized zation of dynamic social network communities.  of human behavior  ng human behavior for social communities – user data man human experiences – reality mining – context – awareness environment – trust models based on subjective logic – trust bining trust and reputation – trust derivation based on trust es.  s  clustering – node-edge diagrams – matrix representation – all networks with matrix-based representations – matrix as opplications – cover networks – community welfare –colla	agement  privacy t network ust compa  visualizind node-l	in on analy arison on ink d	9 Horerence line so rsis – at 9 Holine so iagran	ks - our and ocia trus trus co
multi – relation Unit IV understanding distribution – networks – to transitivity ar spectrum and Unit V graph theory networks, vis hybrid repres- citation networks	munities soci- mal characteric Speculation and predictir enabling new ust in online e alysis — com countermeasu Application — centrality — ualizing social entations — ap	al network infrastructures and communities – decentralized zation of dynamic social network communities.  of human behavior  ng human behavior for social communities – user data man human experiences – reality mining – context – awareness environment – trust models based on subjective logic – trust bining trust and reputation – trust derivation based on trust es.  s clustering – node-edge diagrams – matrix representation – all networks with matrix-based representations – matrix as opplications – cover networks – community welfare –colla	agement - privacy t network ust compa	in on analy arison on ink d	9 Herence line so sis – at 9 Heline so iagran	ks - our and ocia trus trus co
multi – relation Unit IV understanding distribution – networks – to transitivity ar spectrum and Unit V graph theory networks, vis hybrid repres- citation networks	smunities socional characteric Speculation and predictir enabling new ust in online enablysis — comicountermeasu Application — centrality — ualizing social entations — appress.	al network infrastructures and communities – decentralized zation of dynamic social network communities.  of human behavior  ng human behavior for social communities – user data man human experiences – reality mining – context – awareness environment – trust models based on subjective logic – trust bining trust and reputation – trust derivation based on trustes.  s clustering – node-edge diagrams – matrix representation – all networks with matrix-based representations – matrix as applications – cover networks – community welfare –collars.	agement  privacy t network ust compa  visualizind node-l	in on analy arison on ink d	9 Horerence line so rsis – at 9 Holine so iagran	ks - our and ocia trus trus cia
multi – relation Unit IV understanding distribution – networks – transitivity ar spectrum and Unit V graph theory networks, vis hybrid repres- citation networks	Speculation cand predicting and predicting enabling new ust in online enablysis — comicountermeasu Application — centrality — ualizing social entations — aporks.  After comple	al network infrastructures and communities – decentralized zation of dynamic social network communities.  of human behavior  ng human behavior for social communities – user data man human experiences – reality mining – context – awareness environment – trust models based on subjective logic – trust bining trust and reputation – trust derivation based on trustes.  s clustering – node-edge diagrams – matrix representation – all networks with matrix-based representations – matrix as applications – cover networks – community welfare –collars of the course, Student will be able to	agement  privacy t network ust compa  visualizind node-l	in on analy arison on ink d	9 Horerence line so rsis – at 9 Holine so iagran	ks - our and ocia trus trus cia
multi – relation Unit IV understanding distribution – networks – transitivity are spectrum and Unit V graph theory networks, vis hybrid repres- citation networks Course Outco	Speculation speculation and predicting enabling new ust in online enablysis — comicountermeasu Application — centrality — ualizing social entations — aporks.  After completion Interpret the	al network infrastructures and communities – decentralized zation of dynamic social network communities.  of human behavior  ng human behavior for social communities – user data man human experiences – reality mining – context – awareness environment – trust models based on subjective logic – trust bining trust and reputation – trust derivation based on trust services.  s clustering – node-edge diagrams – matrix representation – all networks with matrix-based representations – matrix as applications – cover networks – community welfare –collation of the course, Student will be able to concept of semantic web and ontology	agement  privacy t network ust compa  visualizind node-l	in on analy arison on ink d	9 Horerence line so rsis – at 9 Holine so iagran	ks - our and ocia trus trus cia
multi – relation Unit IV understanding distribution – networks – to transitivity ar spectrum and Unit V graph theory networks, vis hybrid representation networks Course Outco CO1 CO2	Speculation Speculation and predictir enabling new ast in online e salysis — com countermeasu Application — centrality — ualizing social entations — ap arks.  After comple Interpret the	al network infrastructures and communities — decentralized zation of dynamic social network communities.  of human behavior  ng human behavior for social communities — user data man human experiences — reality mining — context — awareness environment — trust models based on subjective logic — trust bining trust and reputation — trust derivation based on trust environment — node-edge diagrams — matrix representation — all networks with matrix-based representations — matrix an applications — cover networks — community welfare —collar serion of the course, Student will be able to concept of semantic web and ontology basic concepts of random graph model	agement  privacy t network ust compa  visualizind node-l	in on analy arison on ink d	9 Horerence line so rsis – at 9 Holine so iagran	ks our an ocia trus trus cour co
multi – relation Unit IV understanding distribution – networks – transitivity ar spectrum and Unit V graph theory networks, vis hybrid repres citation networks  Course Outco  CO1  CO2  CO3	Speculation cand predicting and predicting enabling new ust in online enablysis — comicountermeasu Application — centrality — ualizing social entations — aporks.  After completing interpret the Paraphrase ti	al network infrastructures and communities — decentralized zation of dynamic social network communities.  of human behavior  ng human behavior for social communities — user data man human experiences — reality mining — context — awareness invironment — trust models based on subjective logic — trust bining trust and reputation — trust derivation based on trustes.  s clustering — node-edge diagrams — matrix representation — al networks with matrix-based representations — matrix as applications — cover networks — community welfare —collar section of the course, Student will be able to concept of semantic web and ontology basic concepts of random graph model he metrics of centrality with real world example	agement  privacy t network ust compa  visualizind node-l	in on analy arison on ink d	9 Horerence line so rsis – at 9 Holine so iagran	ks - our and ocia trus trus cia
multi – relation Unit IV understanding distribution – networks – to transitivity ar spectrum and Unit V graph theory networks, vis hybrid repres citation network  Course Outco  CO1  CO2	Speculation and predicting and predicting enabling new ust in online enablysis — comicountermeasu Application — centrality — ualizing social entations — aporks.  Onnes: After completing Interpret the Paraphrase to Interpret the	al network infrastructures and communities — decentralized zation of dynamic social network communities.  of human behavior  ng human behavior for social communities — user data man human experiences — reality mining — context — awareness environment — trust models based on subjective logic — trust bining trust and reputation — trust derivation based on trust environment — node-edge diagrams — matrix representation — all networks with matrix-based representations — matrix an applications — cover networks — community welfare —collar serion of the course, Student will be able to concept of semantic web and ontology basic concepts of random graph model	agement  privacy t network ust compa  visualizin d node-l aboration  Total:	- infe in on analy arison ing on ink d	9 Horence line so rsis — at 9 Holine so iagran orks —	ks our an ocia trus tac our ocia
multi – relation Unit IV understanding distribution – networks – to transitivity ar spectrum and Unit V graph theory networks, vis hybrid repres citation network  Course Outco  CO1  CO2  CO3  CO4  CO5	Speculation and predicting and predicting enabling new ust in online enablysis — comicountermeasu Application — centrality — ualizing social entations — aporks.  After completing Interpret the Interpret the Interpret the Interpret the	al network infrastructures and communities — decentralized zation of dynamic social network communities.  of human behavior  ng human behavior for social communities — user data man human experiences — reality mining — context — awareness environment — trust models based on subjective logic — trust bining trust and reputation — trust derivation based on trustes.  s clustering — node-edge diagrams — matrix representation — all networks with matrix-based representations — matrix as applications — cover networks — community welfare —collar section of the course, Student will be able to concept of semantic web and ontology basic concepts of random graph model he metrics of centrality with real world example human behaviors and trust model of social network	agement  privacy t network ust compa  visualizin d node-l aboration  Total:	- infe in on analy arison ing on ink d	9 Horence line so rsis — at 9 Holine so iagran orks —	ks our an ocia trus tac
multi – relation Unit IV understanding distribution – networks – tr transitivity ar spectrum and Unit V graph theory networks, vis hybrid repres citation network  Course Outco  CO1  CO2  CO3  CO4  CO5  References:	speculation speculation and predictive enabling new ast in online enabling in comments allysis — comments countermeasu Application — centrality — ualizing social entations — aparks.  omes: After completing Interpret the Paraphrase the Interpret the Paraphrase the subgroups	al network infrastructures and communities — decentralized zation of dynamic social network communities.  of human behavior  ng human behavior for social communities — user data man human experiences — reality mining — context — awareness environment — trust models based on subjective logic — trust bining trust and reputation — trust derivation based on trustes.  s clustering — node-edge diagrams — matrix representation — all networks with matrix-based representations — matrix as applications — cover networks — community welfare —collar section of the course, Student will be able to concept of semantic web and ontology basic concepts of random graph model he metrics of centrality with real world example human behaviors and trust model of social network	agement  privacy t network ust compa  visualizind node-laboration  Total:	- infe in on analy arison ink d netwo	9 Horence line so rsis — at 9 Holine so iagran orks —	ks our an ociatrus trus trus ciac our ocia

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.

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

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.

To understand the guideline to Prepare report for oral demonstrations.

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