AUTOMATA AND COMPILER DESIGN

(Common to IT and CSIT)

Course Outcomes: At the end of the course, the student will be able to

CO 1 : Thoroughly understand formal language principles, employ finite state machines to solve problems in computing for recognizing languages and work with LEX tool to write lexical analyzer for programming languages like C, C++ and Java.

CO 2 : Understand various parsing techniques and YAAC tool to write parser for programming languages like C, C++.

CO 3 : Understand how to incorporate semantic actions and type information for identifiers and use them in performing type checking.

CO 4 : Understand various storage organizations, allocation strategies, intermediate code representations and generation for various programming language constructs.

CO 5 : Apply optimization techniques on intermediate code and learn to generate the target code using various target code generation techniques.

CONCEPTS IN DATA SCIENCE

Course Outcomes:

CO1 : Define and examine Data and its evolution, various kinds of data and systems for handling the data.

CO2 : Demonstrate Statistical Inference and Feature Selection on data.

CO3 : Apply regression analysis techniques to solve real world problems.

CO4 : Use machine learning algorithms and analyze.

CO5 : Describe tools for data Visualization

EMERGING WEB TECHNOLOGIES

Course Outcomes: Upon completing the course, a student will be able

CO1 : To build a custom website with HTML, CSS, and Bootstrap.

CO2 : Demonstrate JavaScript, and related Technologies.

CO3 : To design and build robust REST APIs using Node.js, demonstrate the Express framework

CO4 : To develop components using TypeScript, Templates, Decorators and Modularize applications with the Component Router

CO5 : To consume REST services using Observables and to design single page application using Angular2

COMPUTER NETWORKS

(Common to IT and CSIT)

Course Outcomes: After completion of the course, students would be able to:

CO 1 : Understand network hardware and software issues and reference models.

CO 2 : Demonstrate various error correction and detection techniques, framing techniques &channel access protocols.

CO 3 : Realize address mapping and routing protocols in network layer.

CO 4 : Identify the differences between connection oriented & connection less services congestion control techniques and QOS in transport layer.

CO 5 : Demonstrate user-level network programs using the underlying network protocols at application layer.

MANAGERIAL ECONOMICS AND FINANCIAL ANALYSIS

(Common to all branches)

Course Outcomes: At the end of the course, the student should be able to

CO 1 : Familiarize with the fundamentals of Economics such as Demand function, Law of demand, Elasticity of demand and Demand Forecasting methods etc.

CO 2 : Evaluate Economies of Scale and the Break-Even Point of the business activity. With effect from the academic year 2021-22

CO 3 : Understand the different Market Structures and Macro Economic concepts.

CO 4 : Able to understand the accounting system and preparation of Final Accounts.

CO 5 : Analyze Accounting Statements like Income Statement and Balance Sheet to understand financial performance of the business

MOBILE APPLICATION DEVELOPMENT USING ANDROID LAB

(Common to IT and CSIT)

Course Outcomes: At the end of the course, the student will be able to

CO 1 : Comprehend the role of Activities in Android applications and develop apps using two or more activities.

CO 2 : Develop Layouts and views in android using sample applications.

CO 3 : Demonstrate the ways of storing data persistently in Android using databases, shared Preferences and files.

CO 4 : Appreciate and apply content providers for sharing data between applications.

CO 5 : Comprehend the scheme of storing and reading data from internal and external memory.

EMERGING WEB TECHNOLOGIES LAB

Course Outcomes: At the end of the course, the student will be able to

CO 1 : To understand the use of prototyping, ES6 classes, advanced JavaScript concepts and make use of the XMLHttpRequest API.

CO 2 : To define, compare and use of the four types of NoSQL Databases.

CO 3 : To design and build robust REST APIs using Node.js, demonstrate the Express framework and work with Typescript.

CO 4 : To implement one way / two way data binding for data interpolation, dependency injection and des3ign single page application using Angular2.

CO 5 : To create smaller components to build Interactive User interfaces using ReactJS

ADVANCED ENGLISH COMMUNICATION & SOFT SKILLS LAB

(Common to all Branches)

Course Outcomes: Students will

CO 1 : Evolve as effective communicators.

CO 2 : Emerge as decision makers, time managers and good negotiators.

CO 3 : Gain proficiency in resume writing and requisite interview skills

CO 4 : Collate ideas and information and organize them relevantly and coherently.

CO 5 : Be empowered to use soft skills in the global context.

EFFECTIVE TECHNICAL COMMUNICATION LAB

(Common to all Branches)

Course Outcomes: At the end of the course the students will:

CO 1 : Attain proficiency in features of Technical communication

CO 2 : Develop expertise in reading skills

CO 3 : Use English language appropriately to write effective reports, e-mails, notes and summaries.

CO 4 : Become proficient in Analytical and Critical Thinking Skills

CO 5 : Be empowered to use English language effectively in Technical Communication

Universal Human Values

(Mandatory Course)

Course Outcomes: On completion of this course, the student will be able to

CO1 :Understand the significance of values, distinguish between values and skills.

CO2 :Apply the concept of happiness and prosperity to set the goals in life.

CO3 :Evaluate the current scenario in the society, in a right manner.

CO4 :Distinguish between the needs of the self and body through principles of co-existence.

CO5 :Understand the value of harmonious relationship based on trust, respect and other naturally acceptable feelings in human-human relationships.

CO6 :Understand the harmony in nature and existence, and work out their mutually fulfilling participation in the nature.

CYBER SECURITY

(Mandatory Course)

Course Outcomes: At the end of the course, the student should be able to

CO1: Analyze various cyber-attacks.

CO2: Ability to understand the cyber laws and cyber forensics and its types.

CO3: Identifying cyber crime in mobiles and wireless devices and considerable measures to Organizations.

CO4: Analyze cyber crime and define security and privacy implications for an organization.

CO5: Define privacy policies and their specifications; understand real time cyber crime examples and also how to protect them in Internet community from cyber attacks.

INTERNET OF THINGS

(Common to CSE and CSIT)

Course Outcomes: At the end of the course, the student should be able to

CO 1 : Understand the characteristics, protocols and communication models required for logical design of IoT.

CO 2 : Realize the hardware platforms for implementing and interfacing the IoT based board with different peripheral devices and serial communication devices.

CO 3 : Gain knowledge on protocol stacks for IoT and M2M networks and configurations.

CO 4 : Integrate devices and develop an application that can communicate through IoT Cloud.

CO 5 : Implement various case studies in IoT design.

BIG DATA ANALYTICS & PLATFORMS

Course Outcomes: After completion of the course, students would be able to:

CO 1 : Describe big data and use cases from selected business domains. Install, configure and run Hadoop map-reduce programs.

CO 2 : Learn the concepts and internals of Hadoop YARN and Map-Reduce.

CO 3 : Use Hadoop ecosystem tools such as Pig and Hive for big data analytics.

CO 4 : Learn the concepts of MongoDB

CO 5 : Learn the concepts of spar

MACHINE LEARNING

Course Outcomes: After completion of course, students will be able to:

CO 1 : Analyze the concepts of ML and design a ML based system.

CO 2 : Analyze and apply suitable supervised learning methods and algorithms.

CO 3 : Develop various learning models for unsupervised learning - association analysis.

CO 4 : Design and develop algorithms and methods for unsupervised learning - clustering.

CO 5 : Model and solve reinforcement learning based problems.

MODERN ARTIFICIAL INTELLIGENCE

bAt the end of the course, the student should be able to

CO 1 : Understand evolution of AI and intelligent Agents

CO 2 : Understand, Design and develop different types of neural networks

CO 3 : Design and Build Deep Learning neural networks

CO 4 : Understand Deep Learning.

CO 5 : Understand Natural language Processing (NLP) and apply deep learning to NLP.

DISTRIBUTED COMPUTING

(Common to IT and CSIT)

(Professional Elective – I)

Course Outcomes: At the end of the course, the student should be able to

CO 1 : Discuss trends in Distributed Systems.

CO 2 : Apply network virtualization.

CO 3 : Apply remote method invocation and objects.

CO 4 : Design process and resource management systems

BUSINESS INTELLIGENCE

(Professional Elective – I)

Course Outcomes: At the end of the course, the student should be able to

CO 1 : Acquires knowledge of business intelligence basics, learns BI Life cycle and Frameworks.

CO 2 : Able to do Data Design and OLAP modeling.

CO 3 : Gains knowledge about different BI Tools.

CO 4 : Able to Know the different BI Implementation Process, trends and Performance Management.

CO 5 : Gains Knowledge about BI Implementation Process and Collaborative Decision making

DIGITAL IMAGE PROCESSING AND PATTERN RECOGNITION

(Common to CSE and CSIT)

(Professional Elective I)

Course Outcomes: At the end of the course, the student should be able to

CO 1 : Apply pixel relationship and color model to images.

CO 2 : Outline the basics of filtering for image enhancement in the spatial and frequency domain.

CO 3 : Summarize the procedure for restoring degraded images and segmentation.

CO 4 : Do image representation and description.

CO 5 : Perform the classification of patterns

PROBABILISTIC REASONING IN INTELLIGENT SYSTEMS

(Professional Elective I)

Course Outcomes: After completion of course, students will be able to:

CO1 : Analyze the concepts of uncertainty and role of Bayesian inference in AI systems.

CO2 : Analyze and Quantify Uncertainty for probabilistic reasoning using Bayesian Networks.

CO3 : Understand uncertainty over time and develop inference algorithms for temporal models and do Probabilistic Programming.

CO4 : Analyze and combine utility theory combines with probability theory for decision making in the context of episodic decision problems and sequential decision problems.

CO5 : Model decision making in multiagent environments and develop probabilistic learning models.

INTERNET OF THINGS LAB

Course Outcomes: After completion of course, students will be able to:

CO 1 : Setting up Raspberry Pi and connect to a network

CO 2 : Familiarization with GPIO pins and control hardware through GPIO pins

CO 3 : Use sensors to measure temperature, humidity, light and distance

CO 4 : Deploy an IoT application and connect to the cloud

CO 5 : Design IoT based proto types with Raspberry pi using Python

ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING LAB

Course Outcomes: At the end of the course, the student should be able to

CO 1 : Implement neural networks in Python.

CO 2 : Use of AI libraries in Python and build solutions to various problems.

CO 3 : Design and develop python machine learning programs in Python

CO 4 : Solve problems in Machine Learning using ML Libraries in Python

CO 5 : Do natural language processing using NLTK package in Python.

BIG DATA ANALYTICS LAB

Course Outcomes: After completion of the course, students would be able to:

CO 1 : Install Hadoop and perform basic file management task

CO 2 : Implement basic data structures in Hadoop

CO 3 : Implement map reduce concept using matrix multiplication

CO 4 : Install Pig and Hive and execute to do basic programs

CO 5 : Install MongoDB and spark and do basic programs.

QUANTITATIVE ABILITY LAB

Course Outcomes: At the end of the course, the student is able to

CO 1 : Solve the problems using Number Systems, Percentages and Profit & Loss

CO 2 : Solve the problems using Interest, Speed Time and Distance

CO 3 : Solve the problems using Ratio and Proportion, Progressions and Inequality

CO 4 : Solve the problems using Menstruation, Geometric, Clocks & Calendars questions

CO 5 : Practice general problems in Placement, CAT and GRE etc. tests

Essence of Indian Knowledge Tradition

(Mandatory Course for all branches)

Course Outcomes: At the end of the course, the student should be able to

CO 1 : To gain a general idea of the vast Vedic literature and their content and to grasp the relevant concepts of the Vedas and appreciate its relevance in the modern world.

CO 2 : Understand, connect up and explain basics of Indian Traditional Knowledge in Modern Scientific Perspective.

CO 3 : Understand Yoga psychology as both a positive and a normative science and its contribution for a holistic health.

CO 4 : Understand the views of our great philosophers to correlate their efforts to achieve unity in diversity.

ARTIFICIAL INTELLIGENCE

(Mandatory Course)

Course Outcomes: At the end of the course, the student should be able to

CO 1 : Identify the scope for agent based solutions in engineering domain.

CO 2 : Demonstrate advanced search strategies and their applications.

CO 3 : Learning knowledge representation techniques for AI problems.

CO 4 : Establish a logical relationship and reasoning approaches.

CO 5 : Understanding approaches to Solve real world problems through Expert Systems.