Department of Artificial Intelligence and Data Science
K. K. Wagh Institute of Engineering Education and Research
Hirabai Haridas Vidyanagari, Amrut Dham, Panchavati, Nashik-422003

Course Outcomes:

SY BTech – Sem I(2022 Pattern)

Subject 1: Fundamentals of Data Structures (ADS222001)

At the end of this course, Students will be able to

CO222001.1 Describe the fundamental concepts and terminology of data structures and algorithms, including arrays, linked lists, stacks, queues and searching and sorting algorithms

CO222001.2 Demonstrate the ability to choose and implement appropriate data structures such as Array, linked list, stack and queue to solve a given problem

CO222001.3 Implement algorithms for array and linked list processing such as insertion, and deletion using C++

CO222001.4 Use stack and / or queue to solve the given problem

CO222001.5 Compare different searching and sorting algorithms based on their performance, strengths, and limitations.

Subject 2: Computer Networks (ADS222002)

At the end of this course, Students will be able to

CO222002.1 Summarize fundamental concepts of computer network, architectures, models, technologies and security aspects

CO222002.2 Illustrate functions of HTTP, DNS and SMTP protocols.

CO222002.3 Explain the Transport Layer functions such as port addressing, socket programming Connection Management, Error and Flow control mechanism

CO222002.4 Demonstrate routing protocols and mechanisms

CO222002.5 Apply concepts of framing, error detection and control at data link layer

Subject 3: Discrete Mathematics (ADS222003)

At the end of this course, Students will be able to

CO222003.1 Solve problems using propositional logic and number theory.

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CO222003.2 Use relations or functions to solve problems.

CO222003.3 Apply graph theory to represent data and solve associated problems.

CO222003.4 Apply the concepts of trees to generate minimum spanning tree and prefix code.

CO222003.5 Use algebraic structures to solve problems.

Subject 4: Digital Electronics and Logic Design (ADS222004)

At the end of this course, Students will be able to

CO222004.1 Solve the problem of minimization using K Map and Quine Mc-Clusky method of Boolean expression

CO222004.2 Build combinational circuits using AND-OR logic

CO222004.3 Build combinational circuits using SSI and MSI logic

CO222004.4 Explain applications of Flip Flops, registers and shift registers

CO222004.5 Develop sequential logic circuits using Flip Flops and MSI logic

Subject 5: Programming Paradigms and Java Programming (ADS222005)

At the end of this course, Students will be able to

CO222005.1 Remember and describe various programming paradigms

CO222005.2 Make use of appropriate data types and control structures in Java to solve a given problem

CO222005.3 Apply object oriented constructs in Java

CO222005.4 Make use of exception handling and multithreading in Java

CO222005.5 Compare and contrast Functional and Logic programming

Subject 6: Emotional Intelligence (ADS222006)

At the end of this course, Students will be able to

CO222006.1 Outline the emotional and social competencies that make up Emotional Intelligence

CO222006.2 Classify how you can work to enhance your Emotional Intelligence to increase your performance at work

CO222006.3 Compare what Emotional Intelligence is and what it is NOT

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CO222006.4 Analyze how basic human emotions and how they impact on decision making and on developing relationships

CO222006.5 Distinguish models of Emotional Intelligence and what they mean regarding your personal development. Assess how you react in situations with a particular focus on how your feelings and emotions impact upon your behavior.

SY BTech – Sem II(2022 Pattern)

Subject 1: Applied Mathematics-III (SMH222111)

At the end of this course, Students will be able to

 CO222111.1 Understand basic concept of Statistic

 CO222111.2 Understand basic concept of probability distribution

 CO222111.3 Apply the basic concepts of statistics to real life problems

 CO222111.4 Apply the basic concepts of probability distribution theory to real life problems

 CO222111.5 Analyze real life problems by using theory of statistics and Probability distribution

 Subject 2: Advanced Data Structures (ADS222012)

At the end of this course, Students will be able to

CO222012.1 Make use of non-linear data structures such as graph and trees to solve a given problem

CO222012.2 Use different representations of symbol table

CO222012.3 Apply the hash table and it's collision resolution methods and different file handling techniques

CO222012.4 Use efficient indexing techniques and multiway search trees to store and maintain data

CO222012.5 Analyze an algorithm used for solving a given problem

Subject 3: Operating Systems (ADS222013)

At the end of this course, Students will be able to

CO222013.1 Explain operating system services, types of operating systems and basic shell commands

CO222013.2 Illustrate the concept of process scheduling algorithms to solve scheduling problems

CO222013.3 Compare algorithms for deadlock detection, prevention and avoidance

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CO222013.4 Use algorithms for page replacement and I/O management

CO222013.5 Describe Linux commands and utilities such as grep, tr, sed, awk

Subject 4: Database Management System (ADS222014)

At the end of this course, Students will be able to

CO222014.1 Illustrate applications of databases, and features of RDBMS

CO222014.2 Construct database queries using SQL, PL/ SQL and Mongo DB

CO222014.3 Demonstrate ability to prepare logical design of database using ER model and normalization technique

CO222014.4 Compare RDBMS and NOSQL databases

CO222014.5 Explain various protocols for Transaction Management

Subject 5: Software Engineering and Project Management (ADS222015)

CO222015.1 Identify appropriate process model for software development.

CO222015.2 Model software requirements for software development

CO222015.3 Make use of emerging trends for software project management.

CO222015.4 Utilize project metrics for software project estimation and process improvement

CO222015.5 Analyze software risks involved in project development.