R.M.K. COLLEGE OF ENGINEERING AND TECHNOLOGY

RSM Nagar, Puduvoyal – 601 206

Department of Artificial Intelligence and Data Science

Course Outcomes
ODD Semester 2021-22

Sl. No.	Semester	Theory/ Practical	Course Code / Course Name
1)	3	Theory	MA8351 – DISCRETE MATHEMATICS
2)	3	Theory	AD8301 – INTRODUCTION TO OPERATING SYSTEM
3)	3	Theory	AD8302 – FUNDAMENTALS OF DATA SCIENCE
4)	3	Theory	CS8392 -OBJECT ORIENTED PROGRAMMING
5)	3	Theory	AD8351 – DESIGN AND ANALYSIS OF ALGORITHMS
6)	3	Practical	AD8311 - DATA SCIENCE LABORATORY
7)	3	Practical	CS8383 – OBJECT ORIENTED PROGRAMMING LABORATORY
8)	3	Practical	HS8381 – INTERPERSONAL SKILLS /LISTENING AND SPEAKING

EVEN Semester 2021-22

Sl. No.	Semester	Theory/ Practical	Course Code / Course Name
1)	4	Theory	MA8391 -Probability and Statistics
2)	4	Theory	AD8401 – DATABASE DESIGN AND MANAGEMENT
3)	4	Theory	AD8402 – ARTIFICIAL INTELLIGENCE – I
4)	4	Theory	AD8403 – DATA ANALYTICS
5)	4	Theory	AD8001- Professional Elective – I SOFTWARE DEVELOPMENT PROCESS
6)	4	Practical	AD8411 – DATA BASE DESIGN AND MANAGEMENT LABORATORY
7)	4	Practical	AD8412 – DATA ANALYTCS LABORATORY
8)	4	Practical	AD8413 – ARTIFICIAL INTELLIGENCE – I LABORATORY
9)	4	Practical	HS8461 – ADVANCED READING AND WRITING

ODD Semester 2021-22

3rd Semester – B.Tech. Artificial Intelligence and Data Science

MA8351 – DISCRETE MATHEMATICS	
COs	**Course Outcome : The students, after the completion of the course, are expected to ….**
CO1	Have knowledge of the concepts needed to test the logic of a program.
CO2	Have an understanding in identifying structures on many levels.
CO3	Be aware of a class of functions which transform a finite set into another finite set which relates to input and output functions in computer science.
CO4	Be aware of the counting principles
CO5	Be exposed to concepts and properties of algebraic structures such as groups, rings and fields.

AD8301 – INTRODUCTION TO OPERATING SYSTEMS	
COs	**Course Outcome : The students, after the completion of the course, are expected to ….**
CO1	Outline the basic services and functionalities of operating systems
CO2	Analyze various scheduling algorithms, and understand the different deadlock, prevention and avoidance schemes
CO3	Illustrate the different memory management schemes
CO4	Outline the functionality of file systems
CO5	Compare and contrast Linux, Windows and mobile operating systems

AD8302 – FUNDAMENTALS OF DATA SCIENCE	
COs	**Course Outcome : The students, after the completion of the course, are expected to ….**
CO1	Apply the skills of data inspecting and cleansing.
CO2	Determine the relationship between data dependencies using statistics
CO3	Can handle data using primary tools used for data science in Python
CO4	Represent the useful information using mathematical skills
CO5	Can apply the knowledge for data describing and visualization using tools.

CS8392 – OBJECT ORIENTED PROGRAMMING	
COs	**Course Outcome : The students, after the completion of the course, are expected to ….**
CO1	Develop Java programs using OOP principles
CO2	Develop Java programs with the concepts inheritance and interfaces
CO3	Build Java applications using exceptions and I/O streams
CO4	Develop Java applications with threads and generics classes
CO5	Develop interactive Java programs using swings

AD8351 – DESIGN AND ANALYSIS OF ALGORITHMS	
COs	**Course Outcome : The students, after the completion of the course, are expected to ….**
CO1	Design algorithms for various computing problems.
CO2	Analyze the time and space complexity of algorithms.
CO3	Critically analyze the different algorithm design techniques for a given problem.
CO4	Modify existing algorithms to improve efficiency
CO5	Ability to implement techniques in solving real time problems

Laboratory

AD8311-DATA SCIENCE LABORATORY	
COs	**Course Outcome : The students, after the completion of the course, are expected to ….**
CO1	Develop relevant programming abilities.
CO2	Demonstrate knowledge of statistical data analysis techniques
CO3	Exhibit proficiency to build and assess data-based models.
CO4	Demonstrate skill in Data management & processing tasks using Python
CO5	Apply data science concepts and methods to solve problems in real-world contexts and will communicate these solutions effectively

CS8383 – OBJECT ORIENTED PROGRAMMING LABORATORY	
COs	**Course Outcome : The students, after the completion of the course, are expected to ….**
CO1	Develop and implement Java programs for simple applications that make use of classes, packages and interfaces.
CO2	Develop and implement Java programs with arraylist, exception handling and multithreading .
CO3	Design applications using file processing, generic programming and event handling.

HS8381 – INTERPERSONAL SKILLS/LISTENING & SPEAKING	
COs	**Course Outcome : The students, after the completion of the course, are expected to ….**
CO1	Listen and respond appropriately.
CO2	Participate in group discussions
CO3	Make effective presentations
CO4	Participate confidently and appropriately in conversations both formal and informal

EVEN Semester 2021-22

4th Semester – B.Tech. Artificial Intelligence and Data Science

MA8391-PROBABILITY AND STATISTICS	
COs	**Course Outcome : The students, after the completion of the course, are expected to ….**
CO1	Understand the fundamental knowledge of the concepts of probability and have knowledge of standard distributions which can describe real life phenomenon.
CO2	Understand the basic concepts of one and two dimensional random variables and apply in engineering applications.
CO3	Apply the concept of testing of hypothesis for small and large samples in real life problems.
CO4	Apply the basic concepts of classifications of design of experiments in the field of agriculture and statistical quality control.
CO5	Have the notion of sampling distributions and statistical techniques used in engineering and management problems

AD8401 – DATABASE DESIGN AND MANAGEMENT	
COs	**Course Outcome : The students, after the completion of the course, are expected to ….**
CO1	Understand the database development life cycle and apply conceptual modeling
CO2	Apply SQL and programming in SQL to create, manipulate and query the database
CO3	Apply the conceptual-to-relational mapping and normalization to design relational dataabse
CO4	Determine the serializability of any non-serial schedule using concurrency techniques
CO5	Apply the data model and querying in Object-relational and No-SQL databasses

AD8402 – ARTIFICIAL INTELLIGENCE - I	
COs	**Course Outcome : The students, after the completion of the course, are expected to ….**
CO1	Explain autonomous agents that make effective decisions in fully informed, partially observable, and adversarial settings
CO2	Choose appropriate algorithms for solving given AI problems
CO3	Design and implement logical reasoning agents
CO4	Design and implement agents that can reason under uncertainty

AD8403 – DATA ANALYTICS	
COs	**Course Outcome : The students, after the completion of the course, are expected to ….**
CO1	Understand the concept of sampling
CO2	Apply the knowledge to derive hypotheses for given data
CO3	Demonstrate the skills to perform various tests in the given data
CO4	Ability to derive inference using Predictive Analytics
CO5	Perform statistical analytics on a data set

AD8001 – SOFTWARE DEVELOPMENT PROCESS	
COs	**Course Outcome : The students, after the completion of the course, are expected to ….**
CO1	Understand the software process phases in the cycle of software development.
CO2	Gain knowledge of software economics, project organization, project control and process instrumentation
CO3	Analyze the major and minor milestones, artifacts and metrics from management and technical perspective.
CO4	Design and develop software product using conventional and modern
CO5	Analyze the real time software development processes.

Laboratory

AD8411 – DATABASE DESIGN AND ,MANAGEMENT LABORATORY	
COs	**Course Outcome : The students, after the completion of the course, are expected to ….**
CO1	Understand the database development life cycle
CO2	Design relational database using conceptual-to-relational mapping, Normalization
CO3	Apply SQL for creation, manipulation and retrieval of data
CO4	Develop a database applications for real-time problems
CO5	Design and query object-relational databases

AD8412-DATA ANALYTICS LABORATORY	
COs	**Course Outcome : The students, after the completion of the course, are expected to ….**
CO1	After the completion of this course, students will be able to:
CO2	To become skilled to use various packages in Python
CO3	Demonstrate the understanding of data distribution with various samples
CO4	Ability to Implement T-Test ,Anova and Z-Test on sample data sets
CO5	Understanding of Mathematical models in real world problems.
CO6	Conduct time series analysis and draw conclusion.

AD8413 – ARTIFICIAL INTELLIGENCE – I LABORATORY	
COs	**Course Outcome : The students, after the completion of the course, are expected to ….**
CO1	Implement simple PEAS descriptions for given AI tasks
CO2	Develop programs to implement simulated annealing and genetic algorithms
CO3	Demonstrate the ability to solve problems using searching and backtracking
CO4	Ability to Implement simple reasoning systems using either backward or forward inference mechanisms
CO5	Will be able to choose and implement a suitable technics for a given AI task

HS8461 – ADVANCED READING AND WRITING	
COs	**Course Outcome : The students, after the completion of the course, are expected to ….**
CO1	Write different types of essays.
CO2	Write winning job applications.
CO3	Read and evaluate texts critically.
CO4	Display critical thinking in various professional conte