DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING (AI&ML)

Course Outcomes

Year / Sem:	**II/I**	**Regulations:**	**R23**
Course Name:	**MSF**	**Course Code:**	**HS204**
CO Number	**Course Outcome(CO)**		
HS204.1	Apply the number theory concepts to cryptography domain.		
HS204.2	Apply the concepts probability distributions to some case studies.		
HS204.3	Apply the concept of normal distribution.		
HS204.4	Apply the concept of testing of hypothesis to case studies.		
HS204.5	Apply the concept of Markov chain steady state condition		

Year / Sem:	**II/I**	**Regulations:**	**R23**
Course Name:	**DE**	**Course Code:**	**EC216**
CO Number	**Course Outcome(CO)**		
EC216.1			
EC216.2			
EC216.3			
EC216.4			
EC216.5			

Year / Sem:	II/I	Regulations:	R23
Course Name:	COA	Course Code:	CS206
CO Number	Course Outcome(CO)		
CS206.1	Understand the basics of instructions sets and their impact on processor design.		
CS206.2	Demonstrate an understanding of the design of the functional units of a digital computer system.		
CS206.3	Evaluate cost performance and design trade-offs in designing and constructing a computer processor including memory.		
CS206.4	Design a pipeline for consistent execution of instructions with minimum hazards.		
CS206.5	Recognize and manipulate representations of numbers stored in digital computers		

Year / Sem:	II/I	Regulations:	R23
Course Name:	DS C++	Course Code:	CS201
CO Number	Course Outcome(CO)		
CS201.1	Learn and implement the basic programmes using C++.		
CS201.2	Learn the basic types of data structures stacks and Queues. □		
CS201.3	Design programs using a variety of data structures, including Dictionaries, hash tables.		
CS201.4	Understanding the concepts of tree structure, search trees, and AVL-trees		
CS201.5	Implement and know the application of algorithms for sorting and graph techniques.		

Year / Sem:	II/I	Regulations:	R23
Course Name:	SE	Course Code:	CS301
CO Number	Course Outcome(CO)		
CS301.1	Able to compare and select a process model for a business system.		
CS301.2	To identify and specify the requirements for the development of an application		
CS301.3	Apply appropriate software architectures and patterns to carry out high level design of a system and be able to critically compare alternative choices.		
CS301.4	Will to have experience and/or awareness of testing problems and will be able to develop a simple testing report		
CS301.5	To develop and maintain efficient, reliable and cost effective software solution through risk management system		

Year / Sem:	II/I	Regulations:	R23
Course Name:	OS	Course Code:	CS208
CO Number	Course Outcome(CO)		
CS208.1	Analyze various scheduling algorithms.		
CS208.2	Understand deadlock, prevention and avoidance algorithms.		
CS208.3	Compare and contrast various memory management schemes.		
CS208.4	Understand the functionality of file systems.		
CS208.5	Perform administrative tasks on Linux Servers.		
CS208.6	Compare iOS and Android Operating System		

Year / Sem:	II/I	Regulations:	R23
Course Name:	DS C++ Lab	Course Code:	CS202
CO Number	Course Outcome(CO)		
CS202.1	Ability to develop C++ programs for computing and real-life applications using basic elements like Control statements, arrays, functions, pointers and data structures like stacks, Queues and linked lists.		
CS202.2	Ability to implement searching and sorting algorithms.		

Year / Sem:	II/I	Regulations:	R23
Course Name:	OS Lab	Course Code:	CS209
CO Number	Course Outcome(CO)		
CS209.1	Able to implement c programs for different CPU scheduling algorithms.		
CS209.2	Able to implement c programs for file and directory I/O system calls		
CS209.3	Able to implement c programs for prevention and avoidance of deadlocks.		
CS209.4	Able to implement c programs for process synchronization using semaphore and IPC mechanisms Using system calls.		
CS209.5	Able to develop c programs for paging and segmentation technique.		

Year / Sem:	II/I	Regulations:	R23
Course Name:	GS Lab	Course Code:	MC202
CO Number	Course Outcome(CO)		
MC202.1	Students will have developed a better understanding of important issues related to gender in contemporary India.		
MC202.2	Students will be sensitized to basic dimensions of the biological, sociological, psychological and legal aspects of gender. This will be achieved through discussion of materials derived from research, facts, everyday life, literature and film.		
MC202.3	Students will attain a finer grasp of how gender discrimination works in our society and how to counter it.		
MC202.4	Students will acquire insight into the gendered division of labor and its relation to politics and economics.		
MC202.5	Men and women students and professionals will be better equipped to work and live together as equals.		
MC202.6	Students will develop a sense of appreciation of women in all walks of life.		
MC202.7	Through providing accounts of studies and movements as well as the new laws that provide protection and relief to women, the textbook will empower students to understand and respond to gender violence.		

Year / Sem:	II/II	Regulations:	R23
Course Name:	OOP through Java	Course Code:	CS203
CO Number	Course Outcome(CO)		
CS203.1	Define, understand and differentiate the Object Oriented concepts and Java Programming concepts.		
CS203.2	Apply object oriented concepts on real time scenarios.		
CS203.3	Use Exception handling and multithreading mechanisms to create efficient software applications.		
CS203.4	Utilize modern tools and collection framework to create Java applications to solve real world problems.		
CS203.5	Design and develop GUI based applications using applets and swings for internet and system based applications.		

Year / Sem:	II/II	Regulations:	R23
Course Name:	DM	Course Code:	CS205
CO Number	Course Outcome(CO)		
CS205.1	Understand and construct precise mathematical proofs		
CS205.2	Apply logic and set theory to formulate precise statements		
CS205.3	Analyze and solve counting problems on finite and discrete structures		
CS205.4	Describe and manipulate sequences		
CS205.5	Apply graph theory in solving computing problems		

Year / Sem:	II/II	Regulations:	R23
Course Name:	IAI	Course Code:	CS219
CO Number	Course Outcome(CO)		
CS219.1	Learn the distinction between optimal reasoning Vs human like reasoning and formulate an efficient problem space for a problem expressed in natural language. Also select a search algorithm for a problem and estimate its time and space complexities.		
CS219.2	Apply AI techniques to solve problems of game playing, theorem proving, and machine learning.		
CS219.3	Learn different knowledge representation techniques.		
CS219.4	Understand the concepts of state space representation, exhaustive search, heuristic search together with the time and space complexities.		
CS219.5	Comprehend the applications of Probabilistic Reasoning and Bayesian Networks.		
CS219.6	Analyze Supervised Learning Vs. Learning Decision Trees		

Year / Sem:	II/II	Regulations:	R23
Course Name:	DBMS	Course Code:	CS210
CO Number	Course Outcome(CO)		
CS210.1	Gain knowledge of fundamentals of DBMS, database design.		
CS210.2	To Know the basic concepts of Relational Model and Relational Algebra.		
CS210.3	Gain knowledge of normal forms and the basics of SQL for retrieval and management of data.		
CS210.4	Be acquainted with the basics of transaction processing and concurrency control.		
CS210.5	Familiarity with database storage structures and access techniques.		

Year / Sem:	II/II	Regulations:	R23
Course Name:	ATCD	Course Code:	CS221
CO Number	Course Outcome(CO)		
CS221.1	Able to employ finite state machines for modeling and solving computing problems.		
CS221.2	Able to design context free grammars for formal languages.		
CS221.3	Able to distinguish between decidability and undecidability.		
CS221.4	Demonstrate the knowledge of patterns, tokens & regular expressions for lexical analysis.		
CS221.5	Acquire skills in using lex tool and design LR parsers		

Year / Sem:	II/II	Regulations:	R23
Course Name:	JP Lab	Course Code:	CS204
CO Number	Course Outcome(CO)		
CS204.2	Able to write programs for solving real world problems using java collection framework.		
CS204.2	Able to write programs using abstract classes.		
CS204.3	Able to write multithreaded programs.		
CS204.4	Able to write GUI programs using swing controls in Java.		

Year / Sem:	II/II	Regulations:	R23
Course Name:	DBMS Lab	Course Code:	CS211
CO Number	Course Outcome(CO)		
CS211.1	Design database schema for a given application and apply normalization		
CS211.2	Acquire skills in using SQL commands for data definition and data manipulation.		
CS211.3	Develop solutions for database applications using procedures, cursors and triggers		

Year / Sem:	II/II	Regulations:	R23
Course Name:	VC&SS Lab	Course Code:	HS206
CO Number	Course Outcome(CO)		
HS206.1	Speak with a reasonable degree of fluency and accuracy in professional communication situations (such as arriving at a consensus through discussion, making a presentation, and taking part in a telephone conversation)		
HS206.2	Add to the effectiveness of their oral communication by using communication strategies, conventions of politeness and courtesy, and stress and intonation.		
HS206.3	Listen to short audio and video clips in native English accent (British and American), and gain both understanding of messages and sensitivity to native-speaker accents		
HS206.4	Read fluently, comprehending texts of different kinds using multiple strategies and higher-order skills		
HS206.5	Produce written discourses of different kinds (e.g. texts expressing opinions and making a convincing case for one's standpoint, professional emails, and summaries of lengthy texts) with attention to elements of writing such as content, organization, language, style, and mechanics guard against grammatical errors Indians typically make in their speech and writing in English		

Year / Sem:	II/II	Regulations:	R23
Course Name:	COI	Course Code:	MC201
CO Number	Course Outcome(CO)		
MC201.1	Discuss the growth of the demand for civil rights in India for the bulk of Indians before the arrival of Gandhi in Indian politics.		
MC201.2	Discuss the intellectual origins of the framework of argument that informed the conceptualization of social reforms leading to revolution in India.		
MC201.3	Discuss the circumstances surrounding the foundation of the Congress Socialist Party [CSP] under the leadership of Jawaharlal Nehru and the eventual failure of the proposal of direct elections through adult suffrage in the Indian Constitution		
MC201.4	Discuss the passage of the Hindu Code Bill of 1956.		