DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING (AI&ML)

3.1.1. Course Outcome

Year/Sem:	**III/I**	**Regulations:**	**R23**
Course Name:	**Business Economics &Financial Analysis**	**Course Code:**	**HS207**
CO Number	**Course Outcomes(CO)**		
HS207.1	The students will understand the various Forms of Business and the impact of economic variables on the Business.		
HS207.2	The Demand, Supply, Production, Cost, Market Structure, Pricing aspects are learnt.		
HS207.3	The Students can study the firm's financial position by analyzing the Financial Statements of a Company.		
HS207.4			
HS207.5			

Year/Sem:	**III/I**	**Regulations:**	**R23**
Course Name:	**Machine Learning**	**Course Code:**	**CS315**
CO Number	**Course Outcomes(CO)**		
CS315.1	Distinguish between, supervised, unsupervised and semi-supervised learning		
CS315.2	Understand algorithms for building classifiers applied on datasets of non-linearly separable classes		
CS315.3	Understand the principles of evolutionary computing algorithms		
CS315.4	Design an ensemble to increase the classification accuracy		
CS315.5			

Year/Sem:	III/I	Regulations:	R23
Course Name:	Design and Analysis of Algorithms	Course Code:	CS212
CO Number	Course Outcomes(CO)		
CS212.1	Analyze the performance of algorithms		
CS212.2	Choose appropriate data structures and algorithm design methods for a specified application		
CS212.3	Understand the choice of data structures and the algorithm design methods		
CS212.4			
CS212.5			

Year/Sem:	III/I	Regulations:	R23
Course Name:	Data Mining	Course Code:	CS304
CO Number	Course Outcomes(CO)		
CS304.1	Understand the need of data mining and pre-processing techniques.		
CS304.2	Perform market basket analysis using association rule mining.		
CS304.3	Utilize classification techniques for analysis and interpretation of data.		
CS304.4	Identify appropriate clustering and outlier detection techniques to handle complex data.		
CS304.5	Understand the mining of data from web, text and time series data.		

Year/Sem:	III/I	Regulations:	R23
Course Name:	**Image Processing**	**Course Code:**	**CS311**
CO Number	**Course Outcomes(CO)**		
CS311.1	Demonstrate the knowledge of the basic concepts of two-dimensional signal acquisition, sampling, and quantization.		
CS311.2	Demonstrate the knowledge of filtering techniques.		
CS311.3	Demonstrate the knowledge of 2D transformation techniques.		
CS311.4	Demonstrate the knowledge of image enhancement, segmentation ,restoration and compression techniques.		
CS311.5			

Year/Sem:	III/I	Regulations:	R23
Course Name:	**Web Programming**	**Course Code:**	**CS312**
CO Number	**Course Outcomes(CO)**		
CS312.1	Design web pages.		
CS312.2	Use technologies of Web Programming.		
CS312.3	Apply object-oriented aspects to Scripting.		
CS312.4	Create data bases with connectivity using JDBC.		
CS312.5	Build web-based application using sockets.		

Year/Sem:	III/I	Regulations:	R23
Course Name:	Computer Graphics	Course Code:	CS328
CO Number	Course Outcomes(CO)		
CS328.1	Explore applications of computer graphics		
CS328.2	Understand 2D, 3D geometric transformations and clipping algorithms		
CS328.3	Understand 3D object representations, curves, surfaces, polygon rendering methods, and color models		
CS328.4	Analyze animation sequences and visible surface detection methods		
CS328.5			

Year/Sem:	III/I	Regulations:	R23
Course Name:	Computer Networks	Course Code:	CS302
CO Number	Course Outcomes(CO)		
CS302.1	Gain the knowledge of the basic computer network technology.		
CS302.2	Gain the knowledge of the functions of each layer in the OSI and TCP/IP reference models.		
CS302.3	Obtain the skills of subnetting and routing mechanisms.		
CS302.4	Familiarity with the essential protocols of computer networks, and how they can be applied in network		
CS302.5			

Year/Sem:	III/I	Regulations:	R23
Course Name:	**Machine Learning Lab**	**Course Code:**	**CS316**
CO Number	**Course Outcomes(CO)**		
CS316.1	Understand modern notions in predictive data analysis		
CS316.2	Select data, model selection, model complexity and identify the trends		
CS316.3	Understand arrange of machine learning algorithms along with their strengths and weaknesses		
CS316.4	Build predictive models from data and analyze their performance		
CS316.5			

Year/Sem:	III/I	Regulations:	R23
Course Name:	**Prolog/Lisp/ Pyswip Lab**	**Course Code:**	**CS348**
CO Number	**Course Outcomes(CO)**		
CS348.1			
CS348.2			
CS348.3			
CS348.4			
CS348.5			

Year/Sem:	III/I	Regulations:	R23
Course Name:	Node Js/ React Js/Django	Course Code:	CS213
CO Number	Course Outcomes(CO)		
CS213.1	To implement the static webpages using HTML and do client-side validation using JavaScript.		
CS213.2	To design and work with databases using Java.		
CS213.3	To develop an end-to-end application using Java full stack.		
CS213.4	To introduce Node.js implementation for server-side programming.		
CS213.5	To experiment with single-page application development using React.		

Year/Sem:	III/I	Regulations:	R23
Course Name:	Intellectual Property Rights	Course Code:	MC301
CO Number	Course Outcomes(CO)		
MC301.1	Distinguish and Explain various forms of IPRs.		
MC301.2	Identify criteria to fit one's own intellectual work in particular form of IPRs.		
MC301.3	Apply statutory provisions to protect particular form of IPRs.		
MC301.4	Appraise new develop ments in IPR laws at national and international level		
MC301.5			

Year/Sem:	III/II	Regulations:	R23
Course Name:	Knowledge Representation And Reasoning	Course Code:	CS351
CO Number	Course Outcomes(CO)		
CS351.1	Analyze and design knowledge-based systems intended for computer implementation.		
CS351.2	Acquire theoretical knowledge about principles for logic-based representation and reasoning.		
CS351.3	Ability to understand the knowledge-engineering process.		
CS351.4	Ability to implement production systems, frames, inheritance systems, and approaches to handle uncertain or incomplete knowledge.		
CS351.5			

Year/Sem:	III/II	Regulations:	R23
Course Name:	Data Analytics	Course Code:	CS313
CO Number	Course Outcomes(CO)		
CS313.1	Understand the impact of data analytics for business decisions and strategy.		
CS313.2	Carry out data analysis/statistical analysis.		
CS313.3	Carry out standard data visualization and formal inference procedures.		
CS313.4	Design Data Architecture.		
CS313.5	Understand various Data Sources		

Year/Sem:	III/II	Regulations:	R23
Course Name:	Natural Language Processing	Course Code:	CS323
CO Number	Course Outcomes(CO)		
CS323.1	Show sensitivity to linguistic phenomena and an ability to model them with formal grammars.		
CS323.2	Understand and carry out proper experimental methodology for training and evaluating empirical NLP systems.		
CS323.3	Manipulate probabilities, construct statistical models over strings and trees, and estimate parameters using supervised and unsupervised training methods		
CS323.4			
CS323.5			

Year/Sem:	III/II	Regulations:	R23
Course Name:	Information Retrieval Systems	Course Code:	CS321
CO Number	Course Outcomes(CO)		
CS321.1	Understand the Web architecture and applications.		
CS321.2	Understand client side and service side programming.		
CS321.3	Understand how common mistakes can be bypassed and exploit the application.		
CS321.4	Identify common application vulnerabilities.		
CS321.5			

Year/Sem:	III/II	Regulations:	R23
Course Name:	Dataware Housing And Business Intelligence	Course Code:	CS327
CO Number	Course Outcomes(CO)		
CS327.1	Understand architecture of data warehouse and OLAP operations.		
CS327.2	Understand fundamental concepts of Business Intelligence (BI).		
CS327.3	Apply BI key performance indicators.		
CS327.4	Understand utilization of advanced BI tools and their implementation.		
CS327.5	Implement BI techniques and understand BI ethics.		

Year/Sem:	III/II	Regulations:	R23
Course Name:	Software Testing Methodologies	Course Code:	CS409
CO Number	Course Outcomes(CO)		
CS409.1	Understand the purpose of testing and path testing.		
CS409.2	Understand strategies in data flow testing and domain testing.		
CS409.3	Develop logic-based test strategies.		
CS409.4	Understand graph matrices and their applications.		
CS409.5	Implement test cases using any testing automation tool.		

Year/Sem:	III/II	Regulations:	R23
Course Name:	Computer Vision And Robotics	Course Code:	CS410
CO Number	Course Outcomes(CO)		
CS410.1	Implement fundamental image processing techniques required for computer vision		
CS410.2	Implement boundary tracking techniques		
CS410.3	Apply chain codes and other region descriptors, Hough Transform for line, circle, and ellipse detections		
CS410.4	Apply 3D vision techniques and implement motion-related techniques		
CS410.5	Develop applications using computer vision techniques		

Year/Sem:	III/II	Regulations:	R23
Course Name:	Advanced English Communication Skills Lab	Course Code:	HS301
CO Number	Course Outcomes(CO)		
HS301.1	To improve the students' fluency in English, through a well-developed vocabulary, and enable them to listen to English spoken at normal conversational speed by educated English speakers and respond appropriately in different socio-cultural and professional contexts.		
HS301.2	Further, they would be required to communicate their ideas relevantly and coherently in writing.		
HS301.3	To prepare all the students for their placements.		
HS301.4			
HS301.5			

Year/Sem:	III/II	Regulations:	R23
Course Name:	Data Analytics Lab	Course Code:	CS314
CO Number	Course Outcomes(CO)		
CS314.1	Understand linear regression and logistic regression.		
CS314.2	Understand the functionality of different classifiers.		
CS314.3	Implement visualization techniques using different graphs.		
CS314.4	Apply descriptive and predictive analytics for different types of data.		
CS314.5			

Year/Sem:	III/II	Regulations:	R23
Course Name:	Natural Language Processing Lab	Course Code:	CS324
CO Number	Course Outcomes(CO)		
CS324.1	Show sensitivity to linguistic phenomena and an ability to model them with formal grammar.		
CS324.2	Knowledge of NLTK Library implementation.		
CS324.3	Work on strings and trees, and estimate parameters using supervised and unsupervised training methods.		
CS324.4			
CS324.5			