

D.N.R. COLLEGE OF ENGINEERING & TECHNOLOGY

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Department of Computer Science and Engineering

LIST OF COURSE OUTCOMES (COs) R – 16

R – 16 Regulation

List of Course of II B.Tech I Semester

Code	II Year – I SEMESTER
C2101	Statistics with R programming
C2102	Mathematical foundations of computer science
C2103	Digital logic design
C2104	Python programming
C2105	Data structures through C++
C2106	Computer graphics
C2107	Data structures through C++ lab
C2108	Python programming lab

List of Course Outcomes of II B.Tech I Semester

Course Name	Statistics with R Programming	Regulation	R – 16
Course Outcome	Statement		
C2101.1	List motivation for learning a programming language		
C2101.2	Access online resources for R and import new function packages into the R workspace		to the R
C2101.3	Import, review, manipulate and summarize data-sets in	R	
C2101.4	Explore data-sets to create testable hypotheses and identify appropriate statistical tests		
C2101.5	Perform appropriate statistical tests using R Create a with R	nd edit visua	lizations
C2101.6	Perform appropriate statistical tests using R edit visualiz	ations with R	

Course Name	Mathematical Foundations of Computer Science Regulation R – 16
Course Outcome	Statement
C2102.1	Demonstrate skills in solving mathematical problems
C2102.2	Comprehend mathematical principles and logic
C2102.3	Demonstrate knowledge of mathematical modeling proficiency in using mathematical software
C2102.4	Demonstrate knowledge of proficiency in using mathematical software
C2102.5	Manipulate and analyze data numerically and/or graphically using appropriate Software
C2102.6	Manipulate and analyze data numerically and/or graphically using appropriate Software

Course Name	Digital Logic Design	Regulation	R – 16
Course Outcome	Statement		
C2103.1	An ability to define different number system binary add	tion subtraction	on
C2103.2	An ability to define 2's complement representation an representation	d operations	with this
C2103.3	An ability to understand the different switching algebr them for logic functions	a theorems ar	nd apply
C2103.4	An ability to define the karnaugh map for a few varial algorithmic reduction of logic functions	ables and per	form an
C2103.5	An ability to define the other in minimization method variables variable entered mapping (VEM)	ls for any nu	mber of
C2103.6	An ability to define Quine- MeCluskey(QM) Technic algorithmic reduction of logic functions	ues and per	form an

Course Name	Python Programming	Regulation	R – 16
Course Outcome	Statement		
C2104.1	Develop essential programming skills in computer pr like data types, constraints	ogramming o	concepts
C2104.2	Apply the basics of programming in the Python languag	e	
C2104.3	Solve coding tasks related conditional execution, loops		
C2104.4	Solve coding tasks related to the fundamental notations in object oriented programming	s and techniqu	ues used
C2104.5	Explain general computer programming concepts like loops & functions	conditional e>	ecution,
C2104.6	Illustrate general coding techniques and object-oriented	l programmin	g

Course Name	Data Structures through C++	Regulation	R – 16
Course Outcome	Statement		
C2105.1	Summarize the properties, interfaces, and behaviors types	of basic abst	ract data
C2105.2	Discuss the computational efficiency of the principal al searching	gorithms for s	sorting &
C2105.3	Use arrays, records, linked structures, stacks, queues, trees, and graphs in writing programs		
C2105.4	Demonstrate different methods for traversing trees		
C2105.5	Define the fundamental concepts of data structures and abstract data types		
C2105.6	Explain the importance of data structures in develop efficient algorithms	ing and imple	ementing

Course Name	Computer Graphics	Regulation	R – 16
Course Outcome	Statement		
C2106.1	Know and be able to describe the general software arch that use 3D computer graphics	nitecture of pr	ograms
C2106.2	Know and be able to discuss hardware system architecture for computer graphics		
C2106.3	This includes ,but is not limited to :graphics pipeline, fra graphic accelerators / co-processors	ame buffers ,a	nd
C2106.4	Know and be able to select among model for lighting/	shading	
C2106.5	Know and be able to select among model for color, am and light with source	bient light; di	stant
C2106.6	Know and be able to select among model for phong re shading(flat, smooth, gourmand, phong)	eflection mode	el; and

Course Name	Data Structures through C++ Lab	Regulation	R – 16
Course	Statement		
Outcome	Statement		
C2107.1	Distinguish between procedures and object oriented pr	ogramming	
C2107.2	Apply advanced data structure strategies for exp structures	oloring comp	lex data
C2107.3	Compare and contrast various data structures and de area of Performance	sign techniqu	es in the
C2107.4	Implement data structure algorithms through C- structures into the applications such as binary search tr	++. Incorporation Incorporatio	ate data 3 Trees
C2107.5	Implement all data structures like stacks, queries, trees	s, lists and gr	aphs and

	compare their performance and trade offs
C2107.6	Solve problems using data structures such as linear lists, stacks queues, hash tables

Course Name	Python Programming Lab	Regulation	R – 16
Course Outcome	Statement		
C2108.1	Examine Python syntax and semantic and be fluent in t control and functions	he use of Pytl	non flow
C2108.2	Demonstrate proficiency in handling Threads, Files and I	Exceptions	
C2108.3	Create, run and manipulate Python programs using co Lists, Dictionaries and use Regular Expression	re data struct	ures like
C2108.4	Interpret the concepts of GUI and Web Programming as	used in Pytho	on
C2108.5	Implement exemplary applications related to Databas	se Programm	ing with
	ORM in Python		
C2108.6	Implement Web Applications using Python		

List of Course of II B.Tech II Semester

Code	II Year – II SEMESTER
C2201	Software Engineering
C2202	Java Programming
C2203	Advanced Data Structures
C2204	Computer Organization
C2205	Formal Languages And Automata Theory
C2206	Principles Of Programming Languages
C2207	Advanced Data Structures Lab
C2208	Java Programming Lab

List of Course Outcomes of II B.Tech II Semester

Course Name	Software Engineering	Regulation	R – 16
Course Outcome	Statement		
C2201.1	Understand software engineering principles involve software programs and process of requirement requirements validation	d in buildin s specificatio	g large on and
C2201.2	Understand the concepts of agility and the cost of chan of use cases ,building the requirement model	nge and deve	lopment
C2201.3	Analyze requirements analysis and system models for de	esigning patte	rns
C2201.4	Skills to design, implement, and execute test cases at th level	e unit and int	egration
C2201.5	Evaluate the importance of software maintenance and in software evolution	complexities	involved
C2201.6	Apply estimation techniques, schedule project activities and compare conventional and agile software methods	and compute	e pricing

Course Name	Java Programming	Regulation	R – 16
Course Outcome	Statement		
C2202.1	Able to realize the concept of object oriented p programming constructs.	programming	& java
C2202.2	Able to describe the basic concepts of java such as oper	ators ,classes,	objects.
C2202.3	Able to describe the basic concepts of java such as enumeration and various keywords	inheritance ,p	ackages,
C2202.4	Apply the concepts of exception handling and Input/Ou	tput operatior	าร
C2202.5	Able to design the applications of Java & Java applet		
C2202.6	Able to analyze & design the concept of Event handling toolkit	g and abstract	window

Course Name	Advanced Data Structures	Regulation	R – 16
Course Outcome	Statement		
C2203.1	Be able to understand and apply amortised analysis including binary search trees	s on data st	ructures,
C2203.2	Be able to understand and apply amortised analysis on mergable heaps and disjoint sets		
C2203.3	Understand the implementation and complexity analysis of fundamental algorithms such as RSA , primality testing		
C2203.4	Understand the implementation and complexity analysis of fundamental algorithms such as mathsflow, discrete ,fourier transform		
C2203.5	Have an idea of applications of algorithms in a varie linear programming and duality	ty of areas, i	ncluding
C2203.6	Have an idea of applications of algorithms in a varie srting, matching, game-theory	ty of areas, i	ncluding

Course Name	Computer Organization	Regulation	R – 16
Course Outcome	Statement		
C2204.1	Develop a detailed understanding of computer systems	;	
C2204.2	Analyse different number systems, binary additions and Subtraction, standard, floating point, and micro operations		
C2204.3	Develop a detailed understanding of architecture and functionality of central processing unit		
C2204.4	Exemplify in a better way the I/O and memory organiza	tion	
C2204.5	Illustrate concepts of parallel processing, pipelining communication	and inter p	orocessor
C2204.6	Understand about Data transfer and manipulation in ce	ntral processi	ng unit

Course Name	Formal Languages And Automata Theory	Regulation	R – 16
Course	Statement		
Outcome			
C2205.1	Classify machines by their power to recognize languages	5.	
C2205.2	Summarize language classes and grammars relationship among them with		n with
	the help of Chomsky hierarchy.		
C2205.3	Employ finite state machines to solve problems in comp	uting.	
C2205.4	Illustrate deterministic and non-deterministic machines.		
C2205.5	Quote the hierarchy of problems arising in the compute	r science.	
C2205.6	Understand the relation between contexts free language	es, PDA and TM	•

Course Name	Principles Of Programming Languages	Regulation	R – 16
Course	Statement		
Outcome			
C2206.1	Describe syntax and semantics of programming langua	ges	
C2206.2	Explain data ,data types ,and basic statements of programming language		
C2206.3	Design and implement sub program constructs , apply object –oriented,		
	concurrency.		
C2206.4	Design and implement event handling programming constructs		
C2206.5	Develop programs in scheme, ML and Prolog		
C2206.6	Understand and adopt new programming language		

Course Name	Advanced Data Structures Lab	Regulation	R – 16
Course Outcome	Statement		
C2207.1	Implement heap and various tree structure like AVL ,Red-black, B and Segment trees		
C2207.2	Solve the problems such as line segment intersection, convex shell and Voronoi diagram		
C2207.3	Understand the Multi-way search tress like BTrees, B+-Trees etc.		
C2207.4	Design applications which consist of heaps, priority Hash table and its concepts.		
C2207.5	Design applications which consist of heaps, priority queues, Binomial queues		
C2207.6	Apply the knowledge of digital search trees concepts to develop applications.		

Course Name	Java Programming Lab	Regulation	R – 16
Course Outcome	Statement		
C2208.1	Define OOPs concepts & basics of java programming		
C2208.2	Identify the use of classes, inheritance, ,interface, packages in solving specific		
	problems		
C2208.3	Apply Method overloading and Overriding strategy in	java objects.	
C2208.4	Apply the concepts of Multithreading and Exception handling to develop		
	efficient and error free codes.		
C2208.5	Organize the data using different data structures.		
C2208.6	Design the Java Programming using Applets		

List of Course of III B.Tech I Semester		
Code	III Year – I SEMESTER	
C3101	Compiler Design	
C3102	Unix Programming	
C3103	Object Oriented Analysis And Design Using UML	
C3104	Database Management Systems	
C3105	Operating Systems	
C3106	Unified Modeling Lab	
C3107	Operating System & Linux Programming Lab	
C3108	Database Management Systems Lab	
C3109	Professional Ethics & Human Values	

List of Course Outcomes of III B.Tech I Semester

Course Name	Compiler Design	Regulation	R – 16
Course Outcome	Statement		
C3101.1	Understand the system software such as assemblers an	d microproces	sors
C3101.2	Understand the system software's such as assemblers and loaders		
C3101.3	Develop top down and bottom up parsers		
C3101.4	Understand the usage of lex and yacc tools		
C3101.5	Understand SDD ,SDT ,intermediate code generation and machine code		
C3101.6	Analyze the performance of the various page replacement algorithms		

Course Name	Unix Programming	Regulation	R – 16
Course Outcome	Statement		
C3102.1	Describe the architecture and feature of UNIX operating distinguish it from other operating system	system and	
C3102.2	Demonstrate UNIX commands for file handling and process		
C3102.3	Determine shell parameter and I/O redirections		
C3102.4	Analyse grep family and awk patterns.		
C3102.5	Analyze a give problem and apply requisite facets of SH order to devise a SHELL script to solve the problem	ELL programmir	וg in
C3102.6	Develop parent and child process communication mecha	anisms	

Course Name	Object Oriented Analysis And Design Using UML	Regulation	R – 16
Course Outcome	Statement		
C3103.1	Compare structure oriented with object-oriented approaches to solve complex problems and frame solutions		
C3103.2	Identify classes and objects through classification approaches		
C3103.3	Make use of UML constructs and develop class and object diagrams		
C3103.4	Discuss interaction and use cases model and design the use case diagram, interaction diagram , and activity diagram		
C3103.5	Make use of behavioural modelling concepts to build state chart diagram		jram
C3103.6	Build component and deployment diagrams with a concepts	rchitectural n	nodelling

Course Name	Database Management Systems	Regulation	R – 16
Course Outcome	Statement		
C3104.1	Determine the basic concepts and applications of datab	ase systems	
C3104.2	Describe data models and schemas in DBMS		
C3104.3	Understand the relational database system using relational operators in queries		
C3104.4	Use SQL-standard language Queries on database		
C3104.5	Analyze the functional dependencies and design of the database		
C3104.6	Design the issues of managing the data such as efficiend ethical responsibility	cy ,privacy , se	curity ,

Course Name	Operating Systems	Regulation	R – 16
Course Outcome	Statement		
C3105.1	Understand the basic concepts and functions of operating system		
C3105.2	Analyze various scheduling algorithms		
C3105.3	Explain deadlock , prevention and avoidance algorithms		
C3105.4	Compare and contrast various memory management schemes		
C3105.5	Describe I/O management and file systems		
C3105.6	Explain Linux, Android operating systems with gene principles	ral operating	systems

Course Name	Unified Modeling Lab	Regulation	R – 16
Course Outcome	Statement		
C3106.1	Understand the Cases studies and design the Model		
C3106.2	Understand how to identify events and classes		
C3106.3	Apply object oriented and design concepts to solve a given problem		
C3106.4	Identify and map basic software requirements in UML mapping.		
C3106.5	Apply object oriented design to develop a software		
C3106.6	Analyze the Engineering activities with effective presentation and report.		

Course Name	Operating System & Linux Programming Lab	Regulation	R – 16
Course Outcome	Statement		
C3107.1	Illustrate the different CPU scheduling algorithms using	C-language	
C3107.2	Able to implement c programs for different file allocation and file organization techniques		
C3107.3	Able to develop c programs for various memory allocation strategies like MVT and MFT		like
C3107.4	Able to implement c programs for prevention and avoidance of deadlocks		
C3107.5	Illustrate the various CPU scheduling algorithms.		
C3107.6	Analyze the performance of the various page replaceme	nt algorithms.	

Course Name	Database Management Systems Lab	Regulation	R – 16
Course Outcome	Statement		
C3108.1	Understand ,appreciate and effectively explain the underlying concepts of database technologies		
C3108.2	Design and implement a data base schema for a given problem		
C3108.3	Normalize a database		
C3108.4	Populate and query a database using SQL DML/DDL		
C3108.5	Declare and enforce integrity constraints on a database using a state-of-the- art RDBMS		
C3108.6	Programming PL/SQL including stored procedures, stor packages. Design and build a GUI application using a 40	ed functions, GL	cursors,

Course Name	Professional Ethics & Human Values	Regulation	R – 16
Course	Statement		
Outcome			
C3109.1	It gives a comprehensive understanding of a variety issues		
C3109.2	That are encountered by every professional in discharging professional duties		
C3109.3	It provides the student the sensitivity and global outlook		
C3109.4	The contemporary world to fulfill the professional obligations effectively.		

List of Course of III B.Tech II Semester

Code	III Year – II SEMESTER
C3201	Computer Networks
C3202	Data Warehouse And Mining
C3203	Design And Analysis Of Algorithms
C3204	Software Testing Methodologies
C3205	Cyber Security
C3206	Network Programming Lab
C3207	Software Testing Lab
C3208	Data Warehouse And Mining Lab
C3209	IPR& Patents

List of Course Outcomes of III B.Tech I Semester

Course Name	Computer Networks	Regulation	R – 16
Course	Statement		
Outcome			
C3201.1	Understand OSI and TCP/IP models		
C3201.2	Analyze MAC layer protocols and LAN technologies		
C3201.3	Design applications using internet protocols		
C3201.4	Compares different routing protocols		
C3201.5	Understand routing and congestion control algorithms		
C3201.6	Understand how internet works		

Course Name	Data Warehouse And Mining	Regulation	R – 16
Course	Statement		
Outcome	Statement		
C3202.1	Understand the concept of data mining and data ware	e house and D	ataMart's
C3202.2	Understand the data sets with basic summary statistics		
C3202.3	Apply different pre-processing methods. similarly, dissimilarly measures for		
	any given raw data		
C3202.4	Construct a decision tree and resolve the problem of n	nodel overfitti	ng
C3202.5	Compare Apriori and FP-growth association rule	mining algor	ithms for
	frequent it set generation		
C3202.6	Apply suitable clustering algorithm for the given data s	set	

Course Name	Design And Analysis Of Algorithms	Regulation	R – 16
Course Outcome	Statement		
C3203.1	Able to argue the correctness of algorithms using inductive proofs and analyze worst-case running time of algorithms using asymptotic analysis		oofs and ysis
C3203.2	Able to explain important algorithmic design paradigms (divide-and – conquer ,greedy method, dynamic-programming and backtracking) and apply when an algorithmic design situation calls for it		le-and – ind apply
C3203.3	Able to explain the major graph algorithm and employ graphs to model engineering problems, when appropriate		o model
C3203.4	Able to compare between different data structures and pick an appropriate data structure for a design situation		propriate
C3203.5	Able to describe the dynamic programming paradigm and explain when an algorithmic design situation calls for it		when an
C3203.6	Derive and solve recurrences describing the perform conquer algorithmic	ance of divid	le and –

Course Name	Software Testing Methodologies	Regulation	R – 16
Course Outcome	Statement		
C3204.1	Understand the basic testing procedure		
C3204.2	Able to support in generating test cases		
C3204.3	Able to support in generating test suites		
C3204.4	Able to test the applications manually by applying		
C3204.5	Different testing methods and automation tools		
C3204.6	Apply tools to resolve the problem in real time environn	nent.	

Course Name	Cyber Security	Regulation	R – 16
Course Outcome	Statement		
C3205.1	Discuss cyber security architecture principles		
C3205.2	Identifying system and application security threats and vulnerabilities		
C3205.3	Identifying different classes of attacks		
C3205.4	Utilize the cyber security incidents to apply appropriate response		
C3205.5	Analyze risk management processes and practices		
C3205.6	Evaluation of decision making outcomes of cyber secur	ity scenarios	

Course Name	Network Programming Lab	Regulation	R – 16
Course Outcome	Statement		
C3206.1	Understand and explain the basic concepts of Grid Com	puting;	
C3206.2	Explain the advantages of using Grid Computing within a given environment;		nment;
C3206.3	Prepare for any upcoming Grid deployments and be abl potentially available Grid setup.	e to get starte	ed with a
C3206.4	Discuss some of the enabling technologies e.g. high-spe area networks.	ed links and s	storage
C3206.5	Build computer grids		
C3206.6	Understand routing and congestion control algorithms		

Course Name	Software Testing Lab	Regulation	R – 16
Course Outcome	Statement		
C3207.1	Find practical solutions to the problems		
C3207.2	Solve specific problems alone or in teams		
C3207.3	Manage a project from beginning to end		
C3207.4	Work independently as well as in teams		
C3207.5	Define, formulate problem		
C3207.6	Analyze a problem		

Course Name	Data Warehouse And Mining Lab	Regulation	R – 16
Course Outcome	Statement		
C3208.1	Apply preprocessing techniques on real world datasets	S	
C3208.2	Identify Association rules for any real-world dataset using Apriori algorithm		
C3208.3	Build classification models using j48, id3, naïve Bayes a	algorithms	
C3208.4	Build classification models using naïve bayes algorithm	n	
C3208.5	Apply simple k-means clustering algorithm on any dat	a set.	

Course Name	IPR& Patents	Regulation	R – 16
Course Outcome	Statement		
C3208.1	Distinguish and explain various forms of IPRs.		
C3208.2	Identify criteria's to fit one's own intellectual work in pa	rticular form o	of IPRs
C3208.3	Apply statutory provisions to protect particular form of	IPRs	
C3208.4	Analyse rights and responsibilities of holder of Patent, Industrial design etc.	Copyright, Tr	ademark,
C3208.5	Identify procedure to protect different forms o international level.	f IPRs natic	onal and
C3208.6	Develop skill of making search using modern tools and	techniques.	

List of Course of IV B.Tech I Semester

Code	IV Year – I SEMESTER
C4101	Cryptography and network security
C4102	Software architecture & design patterns
C4103	Web technologies
C4104	Managerial economics and financial analysis
C4105	Elective-1 Mobile computing
C4106	Elective-II Software project management
C4107	Software architecture & design patterns lab
C4108	Web technologies lab

List of Course Outcomes of IV B.Tech I Semester

Course Name	Cryptography and Network Security	Regulation	R – 16
Course	Statement		
Outcome	Statement		
C4101.1	Describe the basic principles of network security		
C4101.2	Classify the symmetric encryption techniques		
C4101.3	Apply the public key cryptographic techniques to encry	ypt the data	
C4101.4	Evaluate the authentication and hash algorithms		
C4101.5	Analyze the PGP & S/MIME is used to protect the mess	ages	
C4101.6	Illustrate the requirements for web security and i	implementing	security
	through SSL/TLS		

Course	Software Architecture & Design Patterns	Regulation	P – 16		
Name	Software Architecture & Design Patterns	Regulation	K - 10		
Course	Statement				
Outcome	Statement				
C4102 1	Understand the architecture ,creating it and moving f	Understand the architecture ,creating it and moving from to any, different			
C4102.1	structural patterns				
C4102.2	Analyze the architecture and build the system from the components				
C4102.3	Implementation of design patterns for providing solution	ons to the re	al world		
	problems				
C4102.4	Design and structural patterns				
C4102.5	Illustrate various behavioral patterns				
C4102.6	Do a case study in utilize architectural structures				

Course Name	Web Technologies	Regulation	R – 16
Course Outcome	Statement		
C4103.1	Describe the basic concepts of HTML and CSS & apply design static web pages	the those con	cepts to
C4103.2	Identify various concepts related to dynamic web page using java script	s and validate	them
C4103.3	Understand the XML schemas and concepts of AJAX		
C4103.4	Run the PHP script and working with various concepts		
C4103.5	Create and deploy secure, usable database driven web PHP and RUBY.	applications u	ısimg
C4103.6	Develop web applications using scripting languages &	frame works.	

Course Name	Managerial Economics and Financial Analysis	Regulation	R – 16
Course Outcome	Statement		
C4104.1	Estimating the demand and demand elasticities for a	oroduct	
C4104.2	Explain the Input-Output-Cost relationships and estimation of the least cost combination of inputs		
C4104.3	Understand the nature of different markets and determine price output determination under various market conditions		
C4104.4	Explain different business units ,market structures , pricing strategies		
C4104.5	Formulate financial statements and the usage of various accounting tools for analysis		
C4104.6	Evaluate various investment project proposals with t he help of budgeting techniques for decision making		

Course Name	Elective-1: Mobile Computing	Regulation	R – 16	
Course Outcome	Statement			
C4105.1	Interpret the basic concepts ,principles in mobile computed and develop new protocols related to mobile environment	uting, sensor ent	networks	
C4105.2	Apply various access control techniques for efficient and scalable mobile communication			
C4105.3	Illustrate mobile IP, packet delivery and dynamic host co	Illustrate mobile IP, packet delivery and dynamic host configuration protocols		
C4105.4	Solve any new technical issue related to the new paradigm			
C4105.5	Summarize data delivery mechanisms ,data disse synchronization and develop new mobile applications-	emination a	and data	
C4105.6	Develop new mobile and ad hoc network app algorithms/protocols	olications a	nd / or	

Course	Elective-II	Population	D 16
Name	Software Project Management	Regulation	K - 10
Course	Statement		
Outcome	Statement		
C4106.1	Understand the basic concepts and issues of software	oroject manag	jement
C4106.2	Implement the project plans through managing people, communications and		itions and
	change		
C4106.3	Discuss the employ mechanisms for tracking the softw	are projects	
C4106.4	Conduct activities necessary to successfully complete and close the software		
	projects		
C4106.5	Develop the skills for tracking and controlling software	deliverables	
C4106.6	Create project plans that address real-world managem	ent challenges	5.

Course Name	Software Architecture & Design Patterns Lab	Regulation	R – 16	
Course Outcome	Statement			
C4107 1	Understand interrelationships, principles and guidelines governing			
C4107.1	architectureand evolution over time			
C4107.2	Analyze the architecture and build the system from the	components		
C4107.3	Apply creational patterns that deal with object creation	mechanisms		
C4107.4	Summarize structural patterns that ease the design by identifying a simple			
	way torealize relationships among entities.			
C4107.5	Learn behavioral patterns that identify common communication patterns			
	between objects and realize these patterns.	-		
C4107.6	Classify various case studies			

Course Name	Web Technologies Lab	Regulation	R – 16
Course	Statement		
Outcome	Statement		
C4108.1	Apply and make use of HTML, CSS to develop the web applications		
C4108.2	Build the web application for data storage .		
C4108.3	Construct basic operations and GUI applications using Ruby language		
C4108.4	Develop operations on data and database using PERL.		
C4108.5	Construct usage of cookies and database applications using PHP script		
C4108.6	Build the web application for transmission over net using XML.		

List of Course of IV B.Tech II Semester

Code	IV Year – II SEMESTER
C4201	Distributed Systems
C4202	Management Science
C4203	Machine Learning
C4204	Elective-III Operations Research
C4205	Seminar
C4206	Project

List of Course Outcomes of IV B.Tech II Semester

Course Name	Distributed Systems	Regulation	R – 16
Course Outcome	Statement		
C4201.1	An ability to explain the distributed systems architectur	e	
C4201.2	An ability to outline the interprocess communication in distributed systems		
C4201.3	An ability to explain the communication between distributed objects		
C4201.4	An ability to discuss operating system in distributed systems		
C4201.5	An ability to explain the file accessing model ar	nd various se	rvices in
	distributed system		
C4201.6	An ability to demonstrate concurrency control and pr	operties of tra	ansaction
	in distributed systems		

Course Name	Management Science	Regulation	R – 16
Course Outcome	Statement		
C4202.1	After completion after course the student will acquire management functions	e the knowled	dge from
C4202.2	After completion after course the student will acquire global leadership and organizational behavior	e the knowled	dge from
C4202.3	Will familiarize with the concepts of functional management	management	project
C4202.4	Will familiarize with the concepts of strategic managem	ient.	
C4202.5			
C4202.6			

Course	Machine Learning	Regulation	R – 16
Course Outcome	Statement		
C4203.1	Recognize the characteristics of machine learning that make it useful to real- world problems		
C4203.2	Examine the machine learning algorithms as supervised ,semi-supervised and unsupervised		
C4203.3	Examine the few machine learning tool boxes		
C4203.4	Analyze to use support vector machines		
C4203.5	Analyze to use regularized regression algorithms		
C4203.6	Choose the concepts behind neural networks for learning functions	ng non-linear	

Course	Elective-III	Population	D 16
Name	Operations Research	Regulation	K - 10
Course	Ctatamant		
Outcome	Statement		
C4204.1	Methodology of operations research		
C4204.2	Linear programming column solving methods ,duality	and sensitive	analysis
C4204.3	Integer programming		
C4204.4	Network flows		
C4204.5	Multi criteria decision techniques		
C4204.6	Decision making under uncertainty and risk, G	Game theory,	Dynamic
	programming		

Course Name	Project	Regulation	R – 16
Course Outcome	Statement		
C4204.1	Identify the problem and formulate the appropriate so	lution	
C4204.2	Identify and analyze the requirements for a given project through literature		
	survey		
C4204.3	Design various sub circuits as required to solve the pro	blem.	
C4204.4	Test each sub circuit for its performance and limitation	S.	
C4204.5	Integrate various sub circuits as required within the time frame and test the		
	same.		
C4204.6	Prepare the project thesis and present using appropria	te method	