KKR & KSR INSTITUTE OF TECHNOLOGY & SCIENCES
DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

COURSE OUTCOMES
Academic Year: 2022-2023

List Of Subjects:

4-1 R20

FACTS: Mr.M.Raja Naik

SWES:Mr.Y.Rajesh Babu

EDS: Ms.Sk.Reshma

Python Programming:Ms.N.vijaya Laxmi

IOT: Mr.N.Sree Prakash

ED: Mr.G.Mahesh

3-1 R20

Power Generation and Transmission Systems : Mr.M.raja Naik

Electrical and Electronics Measurements: Mr.T.naga Raju

Analysis of Signals and Systems : Mr.K.Syam Babu

Special Electrical michines : Mr.Sk.Reshma

Fundamentals of AI : Mr.Md.John Saida

Intellectual Property Rights and Patents : Mr.K.Sirisha

2-1 R20

Numerical Methods and Transformations (NMT) : Mr.Samba Siva Murthy

Electrical Circuits and Synthesis (ECS) : Mrs.R.Punyavathi

Electromagnetic Fields (EMF) : Mr.S.Venkatesh

Electrical Machines-I (EM-I) : Mr.K.Gopi Teja

Analog Electronics (AE) : Mrs.Sonia

4-2 R16

Digital Control Systems (DCS) : Mr.Y.Rajesh Babu

Flexible Alternating Current Transmission Systems (FACTS) : Mr.M.Naveen Kumar
Electrical Distribution Systems (EDS): Mr. S.Venkatesh
HVDC Transmission (HVDC) : Mr.J.Anand

3-2 R19

Electrical Drives (ED) : Mr.S.venkatesh

Power System Analysis (PSA) : Mrs.R.Punyavathi
Data Structures(DS) : Mr.P.bhanuchand

Digital Control Systems (DCS) : Mr. Y.Rajesh Babu

Digital IC applications (DICA) : Mr.K.Rama Krishna

Database Management System (DBMS): Ms.B.rajeswarai

2-2 R20

Electrical machines –II (EM-II) : Mrs.R.Punyavathi

Control systems (CS): Dr.M.Veerasamy

Digital Electronics (DE) : Mrs.S.Vaheeda

Data Structures (DS) : Mr.P.Bhanuchand

Principles of Economics & management (PEM) : Mr. Y.Srinivasa Rao

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Department of Computer Science and Engineering

Subject	CO no	Course outcome	Level	Bloom's Taxonomy
DATA SCIENCE	C04104.1	Describe what Data Science is and the skill sets needed to be a data scientist	TL2	Understanding
	C04104.2	Illustrate in basic terms what Statistical Inference means. Identify probability Distributions commonly used as foundations for statistical modelling, Fit a model to data	TL2	Understanding
	C04104.3	Use R to carry out basic statistical modeling and analysis	TL3	Applying
	C04104.4	Apply basic tools (plots, graphs, summary statistics) to carry out EDA	TL3	Applying
	C04104.5	Describe the Data Science Process and how its components interact	TL3	Applying
	C04104.6	Use APIs and other tools to scrap the Web and collect data & Apply EDA and the Data Science process in a case study	TL3	Applying
	C04104.7		TL3	Applying

Name of the Faculty: **M V SHEELADEVI** **Academic Year: 2022-2023**

Subject & Code: **DATA SCIENCE, CS4104** **Regulation: R19**

Course Outcomes: **Class & Semester: IV BTech, I-Sem**

CO-PO Mapping, CO-PSO Mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C04104.1	3	3													
C04104.2	2	3									2		2		
C04104.3			2	2	3		2				2	2			
C04104.4			3	2							2	2			2
C04104.5			3	2							2	2			
C04104.6	2	3									2				
C04104.7	**2**		**3**												
	2.25	**3.00**	**2.75**	**2.00**	**3.00**		**2.00**				**2.00**	**2.00**	**2.00**	**0.00**	**2.00**

3-Strong 2-Moderate 1-Slight

CO's-PO's Mapping Reasons:

1. **CO-1 is described what Data Science is and the skill sets needed to be a data scientist. So, CO – 1 strongly map with PO-1, PO-2 and**
2. **CO-2 is strongly related to illustrate in basic terms what Statistical Inference means. Identify probability distributions commonly used as foundations for statistical modelling, Fit a model to data. so CO-2 strongly maps with PO-2, moderately related with PO- 1, PO-11.**
3. **CO-3 is strongly related to use R to carry out basic statistical modelling and analysis. So CO-3 strongly maps with PO-5, moderately maps with PO-3, PO-4, PO-7, PO-11, PO- 12.**
4. **CO-4 is to apply basic tools (plots, graphs, and summary statistics) to carry out EDA. So CO-4 strongly map with PO-3, and moderately maps to PO-4, PO-11 and PO-12.**
5. **CO-5 is to describe the Data Science Process and how its components interact, So CO-5 strongly map with PO-3, and moderately maps to PO-4, PO-11 and PO-12.**
6. **CO-6 is use APIs and other tools to scrap the Web and collect data. So CO-6 strongly maps with PO-2, moderately related with PO-1, PO-11.**
7. **CO-7 is applied EDA and the Data Science process in a case study. So CO-7 strongly maps with PO-3, moderately related with PO-1.**

Similarly, CO's-PSO's Mapping Reasons:

1. **CO-2 is strongly related to illustrate in basic terms what Statistical Inference means. Identify probability distributions commonly used as foundations for statistical modelling, Fit a model to data. So CO-2 moderately maps with PSO-1.**

2. **CO-4 is to apply basic tools (plots, graphs, and summary statistics) to carry out EDA. So CO-4 moderately maps with PSO-3.**

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AUTONOMOUS

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Class & Semester: III B. Tech II-Sem
Academic Year: 2022-2023
Faculty Name: P. NEELA SUNDARI
Regulation : R20
Subject: CNS
Course Code: 20CS6T01

Subject	CO no	Course outcome	Level	Bloom's Taxonomy
CNS	CO 1	Identify information security goals, classical encryption techniques and acquire fundamental knowledge on the concepts of finite field and number theory.	TL2	Understanding
	CO 2	Compare and apply different encryption and decryption techniques to solve the problems related to confidentiality and authentication	TL2	Understanding
	CO 3	Apply the knowledge of cryptographic checksums and evaluate the performance of different message digest algorithms for verifying the integrity of varying message sizes.	TL3	Applying
	C0 4	Apply different digital signature algorithms to achieve authentication and create secure applications.	TL3	Applying
	CO 5	Apply network security basics, analyze different attacks on networks and evaluate the performance of firewalls and security protocols like SSL, IPSec, and PGP.	TL4	Applying

CO-PO Mapping & CO-PSO Mapping:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO4103.1	3	3											2		
CO4103.2	2	3									2		2		
CO4103.3			2	2	3		2				2	2	2		2
CO4103.4			3	2							2	2	2		2
CO4103.5	**2**	**3**	**2**	**2**	**3**		**2**				**2**	**2**	**2**		**2**

* **3-Strong** **2-Moderate** **1-Slight**

Mapping Reasons:

1. CO-1 is completely related to identify security goals, classical encryption techniques and understand about finite field and number theory. So CO – 1 strongly map with PO-1, PO-2.
2. CO-2 is strongly related to apply different encryption and decryption techniques to solve the problems related to confidentiality and authentication, so CO-2 strongly maps with PO-2, moderately related with PO-1, PO-11.
3. CO-3 is strongly related to evaluate the performance of different message digest algorithms for verifying the integrity of varying message sizes. CO-3 strongly maps with PO-5, moderately maps with PO-3, PO-4, PO-7, PO-11, PO-12.
4. CO-4 is to Apply different digital signature algorithms to achieve authentication and create secure applications., so CO-4 strongly map with PO-3, and moderately maps to PO-4, PO-11 and PO-12.
5. CO-5 is to Apply network security basics, analyze different attacks on networks and evaluate the performance of firewalls and security protocols like SSL, IPSec, and PGP., so CO-5 strongly map with PO-3, and moderately maps to PO-4, PO-11 and PO-12.

CO's-PSO's Mapping:

1. CO1 is to identify security goals, classical encryption techniques and understand about finite field and number theory, so CO1 moderately maps with PSO1.
2. CO2 is to apply different encryption and decryption techniques to solve the problems related to confidentiality and authentication, CO2 moderately maps with PSO1.
3. CO-3 is strongly related to evaluate the performance of different message digest algorithms for verifying the integrity of varying message sizes, so CO3 is moderately related to PSO1, and PSO3.
4. CO-4 is to apply different digital signature algorithms to achieve authentication and create secure applications, CO4 moderately maps with PSO1, PSO3.

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Name of the Faculty : Dr. R.V.Kishore Kumar

Subject : Design and Analysis of Algorithms

Course Outcomes (CO)

Course Code	Course Outcome	Level	Bloom's Taxonomy
C323.1	Describe asymptotic notation used for denoting performance of algorithms	LEVEL-1	Knowledge
C323.2	Analyze the performance of a given algorithm and denote its time complexity usingthe asymptotic notation for recursive and non-recursive algorithms	LEVEL-4	Analysis
C323.3	List and describe various algorithmic approaches	LEVEL-2	Comprehension
C323.4	Solve problems using divide and conquer, greedy, dynamic programming, backtracking and branch and bound algorithmic approaches	LEVEL-3	Applying
C323.5	Apply graph search algorithms to real world problems and Demonstrate an understanding of NP- Completeness theory and lower bound theory	LEVEL-3	Applying

Faculty

H. O. D.

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CO-PO Mapping

CO No.	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C323.1	3	3	1	-	-	-	-	-	-	-	-	1	3	-	-
C323.2	2	3	1	-	-	-	-	-	-	-	-	1	3	-	-
C323.3	2	2	3	-	-	-	-	-	-	-	-	1	3	-	-
C323.4	2	2	3	-	-	-	-	-	-	-	-	1	3	-	-
C323.5	2	2	3	-	-	-	-	-	-	-	-	1	3	-	-
Avg. Mapping	**2.2**	**2.4**	**2.2**	-	-	-	-	-	-	-	-	**1.0**	**3.0**	-	-

** 1 – Slightly 2 - Moderate 3 - Highly

Faculty

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CO No.	PO/PSO	CL	Justification
C323.1	PO1	3	Strongly mapped as students will be able to gain the knowledge of asymptotic notations.
	PO2	3	Strongly mapped as students will be able to analyze the algorithms.
	PO3	1	Slightly mapped as students will be able to design new algorithms different Problem solving methods.
	PO12	1	Slightly mapped as students will be able to apply the concept of different Problem solving methods in searching and sorting etc. problem types.
	PSO1	3	Strongly mapped as students will be able to apply the searching and sorting techniques in real world problems.
C323.2	PO1	2	Moderately mapped as students will be able to gain the knowledge of general plan of recursive and non-recursive algorithms and theory of backward substitution in divide and conquer technique.
	PO2	3	Strongly mapped as students will be able to analyze the time and space complexity of recursive and non-recursive algorithms.
	PO3	1	Slightly mapped as students will be able to design new algorithms using divide and conquer technique.
	PO12	1	Slightly mapped as students will be able to analyze the efficiency of any new algorithm designed by divide and conquer.
	PSO1	3	Strongly mapped as students will be able to apply the searching and sorting techniques in real world problems.
C323.3	PO1	2	Moderately mapped as students will be able to gain the knowledge of greedy method concepts.
	PO2	2	Moderately mapped as students will be able to analyze the time and space complexity of greedy algorithms.
	PO3	3	Strongly mapped as students will be able to design new algorithms using greedy technique.

	PO12	1	Slightly mapped as students will be able to analyze the efficiency of any new algorithm designed by greedy techniques.
	PSO1	3	Strongly mapped as students will be able to apply the greedy techniques in real world problems such as Resource management in software.

C323.4	PO1	2	Moderately mapped as students will be able to gain the knowledge of dynamic method concepts.
	PO2	2	Moderately mapped as students will be able to analyze the time and space complexity of dynamic programming algorithms.
	PO3	3	Strongly mapped as students will be able to design new algorithms using dynamic programming technique.
	PO12	1	Slightly mapped as students will be able to analyze the efficiency of any new algorithm designed by dynamic programming techniques.
	PSO1	3	Strongly mapped as students will be able to apply the dynamic programming techniques in real world problems such as TSP, reliability design.
C323.5	PO1	2	Moderately mapped as students will be able to gain the knowledge of backtracking, branch and bound concepts.
	PO2	2	Moderately mapped as students will be able to analyze the time and space complexity of backtracking, branch and bound algorithms.
	PO3	3	Strongly mapped as students will be able to design new algorithms using backtracking, branch and bound technique.
	PO12	1	Slightly mapped as students will be able to analyze the efficiency of any new algorithm designed by backtracking, branch and bound techniques.
	PSO1	3	Strongly mapped as students will be able to apply the backtracking, branch and bound in real world problems such as event scheduling, stratification oftriangle meshes in computer graphics.
C323.6	PO1	2	Moderately mapped as students will be able to gain the knowledge of NP-Hard and NP- Complete Problems.
	PO2	2	Moderately mapped as students will be able to analyze the time and space complexity of NP-Hard and NP- Complete Problems.

	PO3	3	Strongly mapped as students will be able to design new algorithms using NP-Hard and NP- Complete Problems.
	PO12	1	Slightly mapped as students will be able to analyze the efficiency of any new algorithm designed by NP-Hard and NP- Complete Problems.
	PSO1	3	Strongly mapped as students will be able to apply the NP-Hard and NP-Complete Problems. in real world problems such as event scheduling, stratification oftriangle meshes in computer graphics.

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Department of Computer Science and Engineering

Name of the Faculty: B.Satyanarayana Reddy / Dr.R.V.Kishore Kumar

1. **Subject:** Formal Languages and Automata Theory

Course Outcomes

Subject	CO no	Course outcome	Level	Bloom's Taxonomy(New)
FLAT	C222.1	Employ finite state machines for modelling and their power to recognize the languages.	LL2	Understanding
	C222.2	Understand the concept of Regular languages and Converting Regular Expression to Finite Automata	LL2	Understanding
	C222.3	Understand the concept of context free languages and normal forms	LL2	Understanding
	C222.4	Design CFG's and PDA as well for the given set of grammars	LL6	Creating
	C222.5	Designing turing machines for the given set of grammars.	LL6	Creating

CO-PO Mapping & CO-PSO Mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C214.1	3												1		
C214.2	3	3	3		3								1		
C214.3			3		3	1	1				1		1		
C214.4			3		3	1	1				1		1	2	1
C214.5			3		3	1	1				1	2	1	2	1
	3.00	**3.00**	**2.80**		**3.00**	**1.00**	**1.00**				**1.00**	**2.00**	**1.00**	**1.33**	**2.00**

* **3-Strong** **2-Moderate** **1-Slight**

Mapping Reasons:

1. CO-1 is completely related to Employ finite state machines for modelling and their power to recognize the languages, so CO – 1 strongly map with PO-1.

2. CO-2 is strongly related to Understand the concept of Regular languages and Converting Regular Expression to Finite Automata, so CO-2 strongly maps with PO-1, PO-2, PO-3 and PO-5 and

3. CO-3 is strongly related to Understand the concept of context free languages and normal forms CO-3 strongly maps with PO-3, PO-5 and weakly maps to PO-6, PO-7 and PO-11.

4. CO-4 is strongly related to Design CFG's and PDA as well for the given set of grammars, so CO-4 strongly map with PO-3, PO-5 and weakly maps to PO-6, PO-7 and PO-11.

5. CO-5 is strongly related to Designing turing machines for the given set of grammars. so CO-5 strongly map with PO-3, PO-5 and weakly maps to PO-6, PO-7 and PO-11.

CO's-PSO's Mapping Reasons:

1. CO-1 is completely related to Employ finite state machines for modelling and their power to recognize the languages, so CO – 1 weakly map with PSO-1.

2. CO-2 is strongly related to Understand the concept of Regular languages and Converting Regular Expression to Finite Automata, so CO-2 weakly map with PSO-1.

3. CO-3 is strongly related to Understand the concept of context free languages and normal forms CO-3 weakly map with PSO-1.

4. CO-4 is strongly related to Design CFG's and PDA as well for the given set of grammars, so CO-4 weakly map with PSO-1 and PSO-3.and moderately maps to PSO-2

5. CO-5 is strongly related to Designing turing machines for the given set of grammars. so CO-5 weakly map with PSO-1 and PSO-3.and moderately maps to PSO-2