

Rajeev Gandhi Memorial College of Engineering & Technology Nandyal, Andhra Pradesh

(Autonomous Institute, Affiliated to JNTUA)

Department of Computer Science and Engineering





PART - I

INTRODUCTION OF THE DEPARTMENT

Name of the Program & Year of the Establishment	 B. Tech – Computer Science and Engineering ; 1995 M. Tech – Computer Science ; 2004 					
Latest AICTE Approval & Current Intake	Ref. No. South-Central/1-9323235555/2021/EOA B. Tech – CSE : 180 ; M. Tech – CS : 09					
Current Faculty	Number of Faculty : 46 Professors: 05 , Associate Professors: 06 , Assistant Professors : 35 Total Ph.D Faculty : 11					
Total Number of Students	II Year : 193 III Year : 205 IV Year : 171					
NBA Past Accreditations	3 Times 2003 - Three Years; 2007- Three Years; 2013- Three Years					
Infrastructure	 2 Smart Class Rooms with ICT and Audio – Video Recording Facilities 7 Well Equipped Laboratories (High Configured Systems, Projectors, Internet Connectivity and ACs) 					



DEPARTMENT ACHIEVEMENTS

Number of Research Publications :162	 2020-21: 16 (SCI/SCIE/ Web of Science), 12 (Scopus/UGC Listed); 2019-20: 18 (SCI/SCIE/ Web of Science), 26 (Scopus /UGC Listed); 2018-19: 07 (SCI/SCIE/ Web of Science), 34 (Scopus/UGC Listed); 2017-18: 03 (SCI/SCIE/ Web of Science), 46 (Scopus / UGC Listed);
Research Grants	Research Projects Completed : 04, Research Projects Applied : 04
MoUs	28
Faculty Retention	74%
No. of Ph.Ds Awarded	06
No. of Workshops /FDPs Conducted	57
Affiliation	JNTUA Permanent Affiliation – 3 Years , Proc. No. JNTUA/DAAO/A2/AFFI/09/2020-21
Centre of Excellence	APSSDC Skill Development Centre, Education Through ICT Remote Center IIT Bombay, The Center of Excellence for Quantum Learnings
NAAC	Accredited by NAAC in two cycles with "A" Grade in the year 2012 and A+ in the year 2017.
NIRF Ranking	NIRF Ranking 251-300 band in 2020 and 201-250 band in 2021
10/20/2021	HOD, CSE 3



FACULTY ACHIEVEMENTS

Faculty Publications in Journals and Conferences	Journal Publications : 162 Conference Publications : 42
Faculty Awards	Best Paper Awards : 4 , Best Teacher Awards: 2 Best Researcher Awards : 3
Patents	20
Books/Monographs/Book Chapters	Books / Monographs : 06 , Book Chapters : 08
No. of Faculty got Ph.D Admission	13
NPTEL Certifications	37 + 14 Certifications on OBE
SET / NET Qualified	10
Board of Studies (Outside)	Dr. G Kishore Kumar, BoS Member, Dept. of CSE, JNTUA Dr. N Madhusudhana Reddy, BoS Member, CSE Dept., RU
Resource Persons/Organized Programs	08
Ph. D Guided / Guiding by Faculty	Guided : 03 ; Guiding : 04
Workshops Attended by Faculty	330



STUDENT ACHIEVEMENTS

Ten Students received PRATIBHA awards from Govt. of A.P







Average Package : 4 Lakhs



P. Sai Sravani TCS Digital - 7LPA



R.SREEDHAR REDDY



K.Sai Deepthi TCS Digital - 7LPA



L.Naga Sampada

MTX – 6.5 LPA

10/20/2021

Accolite Digital 6LPA HOD, CSE



STUDENT ACHIEVEMENTS









10/20/2021

HOD, CSE



Criteria 1 : Vision, Mission and Program Educational Objectives

Institute Vision & Mission

Vision

- To develop this rural based engineering college into an institute of technical education with global standards.
- To become an institute of excellence which contributes to the needs of society
- To inculcate value based education with noble goal of "Education for peace and progress

Mission

- To build a world class undergraduate program with all required infrastructure that provides strong theoretical knowledge supplemented by the state of art skills.
- To establish postgraduate programs in basic and cutting edge technologies.
- To create conducive ambiance to induce and nurture research
- To turn young graduates to success-oriented entrepreneurs
- To develop linkage with industries to have strong industry institute interaction
- To offer demand driven courses to meet the needs of the industry and society
- To inculcate human values and ethos into the education system for an all-round development of students.



Process for Defining the Department Vision and Mission



Department Vision and Mission

Vision

- To empower students with cutting edge technologies in computer science and engineering
- To train the students as entrepreneurs in computer science and engineering to address the needs of the society
- To develop smart applications to disseminate information to rural people.

Mission

- To become the best computer science and engineering department in the region offering undergraduate, post graduate and research programs in collaboration with industry
- To incubate, apply and spread innovative ideas by collaborating with relevant industries and R & D labs through focused research groups.
- To provide exposure to the students in the latest tools and technologies to develop smart applications for the society.







Criteria 2: Program Curriculum and Teaching Learning Process





Summary of the Credits of the Program Curriculum in the Regulations R15, R19 and R20

- ✓ I-B. Tech carries 52 credits as per the Regulations of R15
- ✓ I B. Tech carries 38 credits in the Regulations of R19
- ✓ I B. Tech carries 39 credits in the Regulations of R20
- ✓ II, III and IV- B. Tech carries 148 credits as per the Regulations of R15 for the admitted students in the academic years of 2017-18 and 2018-19.
- II, III and IV- B. Tech carries 122 credits as per the Regulations of R19 for the admitted students in the academic years of 2019-20 (followed as per the AICTE model curriculum guidelines).
- II, III and IV- B. Tech carries 121 credits as per the Regulations of R20 for the admitted students in the academic years of 2020-21 (followed as per the AICTE model curriculum guidelines).



Teaching Learning Process – Process Followed to Improve the Quality of Teaching and Learning





Process for Allocation, Monitoring and Evaluation of Projects





Rajeev Gandhi Memorial College of Engineering & Technology (Autonomous)

Department of Computer Science & Engineering

Rubrics of Project & Technical Seminars

Rubrics of Project Evaluation

			Review Overall
Review #	Agenda	Rubrics	Weightage marks
Progress Evaluation-I	Project Synopsis/ Proposal Evaluation	Problem Statement, Literature Review	10
Progress Evaluation-II	Mid-Term Project Evaluation	Methodology and Design of Existing System and Feasibilityof Project Proposal, Planning ofProject Work and Team Structure	40
Progress Evaluation-III	Semester-End Project Evaluation	Demonstrate and Presentation of Project Work with Project Report	100

Rubrics of Technical Seminar Evaluation

	SEMINAR EVALUATION RUBRICS							
		JEINING						
Regd. No	TOPIC SELECTION (10Marks)	PRESENTATION		REPORT	Total			
		(15 Marks)	(15 Marks)	(10 Marks)	(50 Marks)			
10/20/2021		14						



Criteria 3 : Program Outcomes and Course Outcomes



- 1. Course is given by curriculum and allocated to Faculty
- 2. COs are framed by faculty member and tagged with blooms taxonomy levels
- 3. COs are assessed as per assessment plan
- 4. CO Attainment Gap = CO Target – CO Attainment
- If Gap > 0, Plan for Closing the Gap; Otherwise, Increase the Target



10/20/2021



Attainment of Program Outcomes (POs) and Program Specific Outcomes (PSOs)

Program

- POs are given by NBA, and Program Specific Outcomes (PSOs) for program are defined by Department.
- PO/PSOs Targets are defined for Program.

Direct Assessment

For each Course,

- Course Outcomes (COs) are framed by faculty member and tagged with the Bloom's cognitive levels. CO attainment is computed.
- CO-PO and CO-PSO mapping has been done. Relevant COs for each PO and PSO are identified.
- For each PO/PSO, Direct attainment is Performed as per assessment plan.

For all courses, Direct Attainment = average of attainments for each PO and PSO. Indirect Assessment (Course End Survey, Program Exit Survey, Alumni Survey and Employer Survey)

For each PO/PSO, Indirect attainment = 10% Course End Survey + 5% of Program Exit Survey+ 2.5% of Alumni Survey + 2.5% of Employer Survey

For each PO/PSO, Attainment = 80% of Direct attainment + 20% of Indirect Attainment.

<u>PO/PSO Attainment Gap = PO/PSO Target – PO/PSO Attainment;</u>

If Gap >0, Plan for Closing the Gap, Otherwise , Increase the Target







Methods for Assessing the Program Outcomes



Core / Elective Courses

Semester End Examination	:	SEE
Internal Exam (IE)	:	Mid-I and Mid -II
Assignments	:	&

Laboratories

Day-to- Day Observation Experimental Evaluation Record Viva Internal Lab Assessment Semester End Lab Examination

Comprehensive Viva

Technical Seminar

Mini Project & Main Project

10/20/2021



Illustration of the Course Outcomes (COs) Attainment Method for the Sample Course "Principles of Programming Languages (A0524155)"

Course Outcomes

- 1. Apply the parse tree, ambiguity, semantics and syntax of a grammar and understanding the programming domains.
- 2. Understanding arrays of different programming languages and variables.
- **3. Understanding** the statements, parentheses and control statements of different programming language.
- 4. Apply the concepts of subprograms of programming languages.
- 5. Understanding the Abstract data types and designs various kinds of programming languages.
- 6. Understanding the logic programming and functional programming

00	Q.No.	CO 1	CO 2	CO 3	CO 4	CO 5	CO 6	Total
65	1 a)				2			2
	b)	2						2
	c)						2	2
».	d)			2				2
	e)		2					2
	f)					2		2
	g)				2			2
	2 a)	4						4
	b)	4						4
	c)	6						6
	3 a)					4		4
	b)					10		10
	c)							0
	4 a)						8	8
	b)						6	6
	c)							0
and	5 a)		6					6
	b)		8					8
	c)							0
	6 a)				10			10
	b)				4			4
nd	c)							0
	7 a)			10				10
	b)			4				4
	c)							0
нор с	Total	16	16	16	18	16	16	98

External Question Paper Marks to COs

10/20/2021



Illustration of the Course Outcomes (COs) Attainment Method for the Sample Course "Principles of Programming Languages (A0524155)"

Mid - I and Mid – II Question Paper Marks to COs

	CO 1	CO 2	CO 3	CO 4	CO 5	CO 6	Total
1 a)	2						2
b)		2					2
c)		2					2
d)			2				2
e)			2				2
2 a)	3						3
b)	2						2
3 a)		1					1
b)		4					4
4 a)		2					2
b)			3				3
5 a)			4				4
b)			1				1
Total	7	11	12	0	0	0	30

	CO 1	CO 2	CO 3	CO 4	CO 5	CO 6	Total
1 a)				2			2
b)						2	2
c)					2		2
d)						2	2
e)				2			2
2 a)				2			2
b)				3			3
3 a)					2		2
b)					3		3
4 a)						2	2
b)						3	3
5 a)					2		2
b)						3	3
Total	0	0	0	9	9	12	30



Illustration of the Course Outcomes (COs) Attainment Method for the Sample Course "Principles of Programming Languages (A0524155)"

Marks of Each CO

Course Outcomes	CO 1	CO 2	CO 3	CO 4	CO 5	CO 6	Total
FE	16	16	16	18	16	16	98
IE	7	11	12	9	9	12	60
Assignment	1.66	1.66	1.66	1.66	1.66	1.66	10

Average CO Weightages

CO1 EM % = (CO1 FE /98) * 100; CO1 IM % = (CO1 IE /60) * 100; CO1 AM % = (CO1 Assignment /10) * 100

Course Outcomes	CO 1	CO 2	CO 3	CO 4	CO 5	CO 6	Total
EM (%)	16.32653	16.32653	16.3265	18.36735	16.32653	16.32653	100
IM (%)	11.66667	18.33333	20	15	15	20	100
AM (%)	16.6	16.6	16.6	16.6	16.6	16.6	100
Avg	15.17524	16.8419	17.2585714	17.43714	16.00857	17.25857	100

CO1 EM% * 0.7 + CO1 IM % * 0.25 + CO1 AM % * 0.05

Weightages of Assessment Tools

Final Exam Internal Test Assignment

25%

70%

5%



Illustration of the Course Outcomes (COs) Attainment Method for the Sample Course "Principles of Programming Languages (A0524155)"

Student Marks

S. No.	Reg. No.	Internal Marks (IM)	Assign. Marks (AM)	Final Exam Marks (EM)	% of IM	% of AM	% of EM	
1	17091A0502	13.3	5	30	53.00	100	42.86	
2	17091A0503	21.8	5	37	87.00	100	52.86	
3	17091A0506	11	5	32	44.00	100	45.71	
4	17091A0507	12.5	5	29	50.00	100	41.43	
5	17091A0508	5	5	16	20.00	100	22.86	
6	17091A0509	5.25	5	20	21.00	100	28.57	
7	17091A0510	15.3	5	30	61.00	100	42.86	
	:							
169	18095A0501	10.8	5	31	43.00	100	44.29	
% of IM = (IM/25) *100								
		9	% of AM =	(AM/5) *10)0 %	% of EM = (EM/70) *100		
10/	/20/2021			HOD, CSE		22		



CO Attainment Results After Normalization

N CO1 = (%of EM * CO1 EM % *0.7 + %of IM * CO1 IM % *0.25 + %of AM * CO1 AM % *0.05) / (CO1 EM % *0.7 + CO1 IM % *0.25 + CO1 AM % *0.05)

S.No	Reg.No	N CO1	N CO2	N CO3	N CO4	N CO5	N CO6
1	17091A0502	47.932	48.43351	48.54376	47.75842	48.1958	48.543758
2	17091A0503	61.9978	64.47202	65.0159	62.44382	63.29932	65.015905
3	17091A0506	48.3539	47.92306	47.82835	47.92959	48.12728	47.828349
4	17091A0507	46.2795	46.6477	46.72863	46.0599	46.47319	46.728629
5	17091A0508	26.5273	25.88135	25.73935	25.91466	26.1875	25.739355
6	17091A0509	31.0229	30.03108	29.81305	30.3431	30.5012	29.813048
7	17091A0510	49.4696	50.61062	50.86145	49.47889	50.0698	50.861447
169	18095A0501	47.0859	46.68152	46.59264	46.66119	46.87317	46.592643
Targ	et Set for Each CO	55	55	55	55	55	55
No. of Students Reached the Target Level (N1)		82	85	85	82	84	85
% of Attainment (N1/N)		48.52	50.30	50.30	48.52	49.70	50.30
Attained ?		NO	YES	YES	NO	NO	YES

10/20/2021



Illustration of the Course Outcomes (COs) Attainment Method for the Sample Course "Principles of Programming Languages (A0524155)"

CO Attainment Calculation Table

	CO 1		CO 2		CO 3		CO 4		CO 5		CO 6	
	No. of students Attained	Weightage Points										
>= 55%	82	3	85	3	85	3	82	3	84	3	85	3
40% to 55%	73	2	66	2	65	2	71	2	69	2	65	2
<40%	14	1	18	1	19	1	16	1	16	1	19	1
No. of students	169		169		169		169		169		169	
Attainment value	2.	40	2.40)	2.	39	2.3	9	2.4	40	2.	39

Attainment value = (No. of students Attained(>= 55%) * Weightage points(>= 55%) +

No. of students Attained(40% to 55%) * Weightage points(40% to 55%) +

No. of students Attained(<40%) * Weightage points(<40%)) / No. of Students



CO – PO Mapping and PO Attainment Calculation

	СО															
CO	Attainment	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
	Value															
CO 1	2.40	2	1	2						2			1	1	1	1
CO 2	2.40	2	1	1						1			2		2	
CO 3	2.39	1		1									2		2	1
CO 4	2.39	2	1	1	1					1			2		2	
CO 5	2.40	2	1	2	1	1				1			1	1	2	1
CO 6	2.39	2	1			1		1		1				1	1	1
PO At	ttainment	2 10	2 10	2 10	2 10	2 10		2 20		2 10			2 20	2 10	2 10	2 10
V	/alues	2.40	2.40	2.40	2.40	2.40	-	2.33	-	2.40	-	-	2.33	2.40	2.40	2.40

PO 1 Attainment value = (CO1 Attainment value * PO1 Mapping value if present + CO2 Attainment value * PO1 Mapping value if present + CO3 Attainment value * PO1 Mapping value if present + CO4 Attainment value * PO1 Mapping value if present + CO5 Attainment value * PO1 Mapping value if present + CO6 Attainment value * PO1 Mapping value if present) / Sum of PO1 values



Overall Attained Values of POs and PSOs From Direct and Indirect Assessment

PO Attainment Values for the Academic Year 2019-20

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
Direct Attainment	2.59	2.59	2.60	2.59	2.60	2.59	2.64	2.63	2.63	2.63	2.60	2.60
Indirect Attainment	2.85	2.88	2.82	2.85	2.8	2.78	2.8	2.78	2.78	2.78	2.85	2.8

PSO Attainment Values for the Academic Year 2019-20

Course	PSO1	PSO2	PSO3
Direct Attainment	2.59	2.59	2.60
Indirect Attainment	2.85	2.82	2.85



Criteria 4: Students' Performance





Success Rate

Success Rate= No. of Students Successfully Graduated / Total No of Students





Enrolment Ratio



Average Enrolment Ratio = 98.89

10/20/2021

HOD, CSE



Placements, Higher Studies and Entrepreneurship

Item	LYG (2016-17)	LYGm1(2015-16)	LYGm2(2014-15)					
Total No of Final Year Students(N)	140	116	84					
No of students placed in the companies or government sector(X)	104	92	53					
No of students admitted to higher studies with valid qualifying scores(GATE or equivalent State or National Level tests, GRE, GMAT etc.) (Y)	1	2	5					
No of students turned entrepreneur in engineering/technology (Z)	0	0	0					
Placement Index [(X+Y+Z)/N] :	0.75	0.81	0.69					
Average Placement [(P1 + P2 + P3)/3] :	0.75							
Assessment [30 * Average Placement] :	22.50							



Students Placed Companies





Sample Photos Related to Placements-2019-20





HOD, CSE



Our Proud Alumni



Name: Hari Kishore Reddy Kuppa Software Engineer Microsoft



Mrs Madhavi Penumalli Associate Director Cognizant Technology Solutions, Chennai



Venkat Challa Sr Consultant Apple



Amarnath Reddy Chilumuri Senior Analyst Manhattan Associates Inc. South Atlanta, USA.





Bhaskar Majji Executive, Accounts Delivery Microsoft

Krishna Charan Gurajala Deputy Station Superintendent Indian Railways



Mr Manohar Yadav Amazon Manager, Development Bangalore



Bharath Cheppali Project Manager Deloitte, Bangalore



Tabrez Syed Morgan Stanley Associate, Model Risk Management Mumbai



Santhosh Kamalapuram Manager, British Telecom, UK



Mr Subramanyam Founder and CEO, UniFirst Robotics Consultant, Tata Consultancy Services Bangalore

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Professional Societies / Chapters and Organizing Engineering Events



Events Organized in association with IE(I), ISTE and CSI Student's Chapter in 2017-18, 2018-19 and 2019-20

HOD, CSE



Publications of Technical magazines, newsletters etc.



COMPASS Magazine's Published in 2017-18, 2018-19 and 2019-20



HOD, CSE



Criteria 5 Faculty Information and Contribution

Student Faculty Ratio (SFR)

Year	CAY (2020-21)	CAYm1 (2019-20)	CAYm2 (2018-19)
No. of Students in UG 2 nd Year (u1)	180+17=197	180+04=184	180+01=181
No. of Students in UG 3 rd Year (u2)	180+04=184	180+01=181	180+00=180
No. of Students in UG 4 th Year (u3)	180+01=181	180+00=180	180+00=180
UG1	562	545	541
No. of Students in PG 1 st Year (p1)	18	18	18
No. of Students in PG 2nd Year (p2)	18	18	18
PG1	36	36	36
Total No. of Students in the Department (S)	598	581	577
No. of Faculty in the Department (F)	35	33	36
Student Feaulty Dation (SFD)	SFR1=	SFR2=	SFR3=
	S1/F1=17.09	S2/F2=16.03	S3/F3=17.61
Average SFR= =(SFR1+S	FR2+SFR3)/3		16.91


Faculty Cadre Proportion

Year	Professors		Associate Professors		Assistant Professors	
	Required F1	Available	Required F2	Available	Required F3	Available
2020-21	3	5	6	6	19	24
2019-20	3	4	6	2	19	27
2018-19	3	3	6	3	19	30
	RF1= 4	AF1 =3	RF2=7	AF2= 5	RF3 =19	AF3=22
Cadre Ratio Marks						20.00

Formula for Cadro Patio Marks -	∫ AF1	AF2 x 0.6	AF3 x 0.4	v 10
FOITINIA IOI CAUTE RALIO MAIRS	$\left \frac{1}{RF1} \right ^{+}$	RF2	RF3 ∫	X 10

Faculty	Qua	lification

Year	Х	Y	F	FQ = 2.0 x [(10X +4Y)/F)]
2020-21 (CAY)	11	24	29	14.21
2019-20 (CAYm1)	06	27	29	11.59
2018-19 (CAYm2)	6	30	28	12.86
Ave	12.88			

X is no. of regular faculty with Ph.D., Y is no. of regular faculty with M. Tech., F is no. of regular faculty required to comply 20:1 Faculty Student ratio



Faculty Retention

Description	2019-20 (CAYm1)	2020-21 (CAY)
No. of Faculty Retained	29	24
Total No. of Faculty	36	36
% of Faculty Retained	81%	67%
Ave	74.00%	



Faculty Competencies in Correlation to Program Specific Criteria

Name of the Faculty	Specialization	Research Publications	Competency for PSOs
Dr. K Subba Reddy	Image Processing, Pattern Recognition, Computer Networks	20	1,3
Dr. K Rajendra Prasad	Data Mining, Big Data	57	1,2
Prof. Prahlada Rao B.B	Artificial Intelligence	60	2,3
Dr. N Madhusudhana Reddy	Data Mining	10	1,3
Dr. R Raja Kumar	Machine Learning	15	1,2
Dr. G. Kishore Kumar	Machine Learning	15	1,2
Dr. M. Surya Bhupal Rao	DIP	9	1,3
Dr. S. Vijay Kumar	Cloud Computing	11	2,3
Dr. M Indrasena Reddy	Network Security	20	1,3
Dr. P. Hari Krishna	Information Security, Cloud Computing	23	1,2,3
Dr. R. Kaviarasan	Adhoc Networks and Information Security	21	1,2



Faculty Publications, Book Chapters and Patents in Last Three Academic Years

Faculty Publications	2020-21	2019-20	2018-19	2017-18
SCI/ SCIE / ESCI	16	18	7	3
Scopus	12	21	11	19
Others	-	5	23	27
Book Chapters	4	2	-	-
Patents	8	5	3	4(Before 2017)*
Total	40	51	44	53

No. of Ph D Students Guiding / Guided by the Dept. Faculty					
Name of the Faculty No. of PhD Students Guiding No. of PhD Students Guid					
Dr. K Subba Reddy	01	-			
Dr G Kishore Kumar	02	-			
Dr. K Rajendra Prasad	03	01			
Total	04	03			
10/20/2021	HOD CSE	10			



Faculty Patents

S.NO	Name of Faculty	Title of Patent	Application Number	Year	Status (Filed/Granted)
1	Dr R. Raja Kumar	IEAC-System: Intelligent IOT System for Agricultural Environment Control	202041010147	2020	Filed
2	Dr R. Raja Kumar	Dataset Discovery in in Data Investigative Using Machine Learning and AI based Programming	2020101987	2020	Granted
3	Dr. N. Madhusudhana Reddy	METHOD FOR DETECTING ANTI PATTERNS IN WEB SERVICES AND BUSINESS PROCESSES	201941014136 A	2019	Filed
4	Dr. N. Madhusudhana Reddy	A SECURED IMAGE PROCESSING SYSTEM OF BIOMETRIC BASED AUTOMATED RATION DISTRIBUTION	201941039689 A	2019	Filed
5	Dr M.Surya Bhupal Rao	Borewell Secure System using Supervised Learning Techniques	202041043122A	2020	Filed
6	Dr M.Surya Bhupal Rao	An efficient methodology to manage the admissions in hospitals during the pandemics such as covid 19	2020102836	2020	Granted
7	Dr.R.Kaviarasan	Self diagnosis personalized women safety approach application model using machine learning approach	202141009700A	2021	Filed
8	Dr.S.Vijaya kumar	A secure image processing system of biometric based automated ration	201941039689A	2019	Filed
9	Dr.K.Rajendra Prasad	An Efficient Methodology to Manage the Admissions In Hospitals During The Pandemics Such As Covid 19	2020102836	2020	Granted
10	Mr.Prathap Naidu	Localization method using integrated sensors in autonomous scrubblin robots for industrial cleaning	2021101252	2021	Filed



Faculty Patents

S.NO	Name of Faculty	Title of Patent	Application Number	Year	Status (Filed/Granted)
11	K Nitalaksheswara Rao	System And Method To Predict Rheumatoid Arthritis (Ra)	202041023528	2020	Published
12	K Nitalaksheswara Rao	Smart Face Shield	202041026386	2020	Published
13	K Nitalaksheswara Rao	Plant Growth Management System	202041028079	2020	published
14	K Nitalaksheswara Rao	Smart Hand Sanitizer Making And Dispensing Machine	202041029571	2020	published
15	K Nitalaksheswara Rao	Smart Farm Fence	202041030623	2020	published
16	K Nitalaksheswara Rao	AUTOMATIC HAND Sanitizer(design Patent)	330781-001	2020	Filed
17	Prahlada Rao B.B.	A method and system for Debugging or run time profiling of heterogeneous computation al grids and/or geographically distributed systems	275095, IPO	2016	Granted
18	Prahlada Rao B.B.	Performance Groups-Based Fast Simulated Annealing that improves Speed and Quality of VLSI Placement	6725437B1 US	2014	Granted
19	Prahlada Rao B.B.	METHOD AND SYSTEM FOR DYNAMIC ADAPTATION OF PROGRAM EXECUTION ON DIFFERENCT TARGET HARDWARE	4973/CHE/2014	2014	Published
20	Prahlada Rao B.B.	A CLOUD STORAGE SERVICE FOR CLOUD COMPUTING	1392/CHE/2013	2013	Filed
1	0/20/2021	HOD, CSE			42



Funded Projects Applied by the Faculty

Name of the Faculty	Title of the Project	Sponsoring Agency	Amount	Year & Status
 Dr. K Rajendra Prasad, PI Dr. K Subba Reddy, Co-PI 	Nano - Assistive Technology Based Cognitive Intelligent System for Healthcare	SERB, DST	36,36,000	2020 <i>,</i> Waiting
 Dr. K Rajendra Prasad , PI Dr. K Subba Reddy, Co-PI 	An Intelligent Knowledge- Based Social Computing System for Effective Healthcare Digitization in Rural Areas	AICTE	21,40,000	2020, Evaluation completed, Waiting for Result
3. Dr.P. Harikrishna	Data Sciences	ATAL, AICTE	90,000/-	2020 , Applied
4. Dr.R.Kaviarasan	Necessity of Cloud Computing in the Digital Era	ATAL, AICTE	90,000/-	2020 , Applied







Consultancy by the Faculty

Name of the Faculty	Title of the Project	Sponsoring Agency	Amount	Year
Dr. K Subba Reddy	Infrastructure Management Services for Computer Based Test (CBT)	TCS	3,87,000	2020
Dr. K Subba Reddy	Infrastructure Management Services for Computer Based Test (CBT)	TCS	3,50,000	2019
Dr. K Subba Reddy	Infrastructure Management Services for Computer Based Test (CBT)	TCS	3,20,000	2018
	Total Amount		10,	57,000



Department of Computer Science & Engineerin

Our Faculty Guest Lectures / Resource Person

Sl. No.	Name	Tile of the Presentation	Organization / Industry	Date (MM/DD/YYYY)
		Seminar on "eScience to AI" Talks	IIT(BHU), Varanasi, AICTE Sponsored	11/01/2020
		Microprocessors & Computer Architecture on line Talks	IIITDM, Kurnool	July- Dec 2020
1	Dr. Prahlad Rao	Dr. Prahlad Rao Invited Talk on Evolution of Computing: From HPC to AI & ML		14t/01/2020
		Invited Talk on Evolution of Computer	Santiram Engineering	25/02/2021
		talk to Engineering Students		
2	Dr N MadhuSudhan	Data Mining Functionalities and	Gopalan College of Engg. &	22/09/2021
L	Reddy	/ Applications Management, Ba		22,03,2021
		Machine Learning and Fuzzy Decision	Usha Rama College of Engg.	23rd March 2021
2	Dr C Kishara Kumar	Trees	& Tech., Kakinada	
3	DI G KISHOFE KUMAI	Ensemble of Decision Trees for Robust	Annai College of Arts &	15/07/2021
		Classification	Science, Tiruchirapalli	15/07/2021
4	Dr K Rajendra Prasad	Data Visualization Techniques	SRIT, Anantapur	25/06/2021



10/20/2021





HOD, CSE



Criteria 6 Facilities and Technical Support : Technical Labs and Special Labs

Computer Programming Lab-1: (Utilization Rate : 100%)

- 1. DELL PowerEdge 2950 (Windows Server) & DELL PowerEdge 2950 (Ubuntu Server)
- 2. Dell 3010 Desktops, Intel Core I7 2nd Generation, 8GB RAM - 60 No's
- 3. Printers-2 No's & Central Air conditioner Utilized for <u>PSP Lab, DS Lab, Python Lab, DAA</u> Lab, UNIX Lab, and CD & CN Lab





- 2. <u>Computer Programming Lab-2:</u> (Utilization Rate : 100 %):
- DELL OptiPlex 3046 Model Desktop with Intel CORE I5, 4GB DDR-4 RAM - 50 No's
- 2. Dell 3010 Desktops, Intel Core I7 2nd
Generation, 8GB RAMCore I7 2nd
--- 10 No's

Utilized for <u>PPS Lab, DS Lab, Python Lab, STMT</u> Lab, Android Programming Lab





 3. <u>Computer Programming Lab-3:</u> (Utilization Rate : 100 %): 1. Dell Power Edge 2950 Windows Server -1 & User Management Server-1 2. Dell 3010 Desktop with Intel Core I7- 70 No's 3. Epson S41 Projector - 1 Utilized for <u>PPS Lab, DS Lab, WT Lab</u> 	
	 4. Computer Programming Lab-4: (Utilization Rate : 100 %): 1. Dell Power Edge 2950 Windows Server -1 & IBM AIX Server -1 (Rational Rose -2018) 2. Dell 3010 Desktop with Intel Core I7- 70 No's 3. Epson S41 Projector - 1 Utilized for OS Lab, DBMS Lab, and PHP Lab



5. <u>Project and PG LAB:</u> (Utilization Rate : 100 %):

- 1. HP ProLiant DL360 G5 Windows Server -1 & IBM AIX Server-1
- 2. Dell 3010 Desktop with Intel Core I7 68 No's
- 3. Epson S41 Projector 1
- 4. HP LaserJet 108W
- **Utilized for** Mini Project Lab, Main Project Lab, Internship Lab





6. <u>IT Workshop Lab:</u> (Utilization Rate : 100 %):

- 1. Dell 3010 Desktop with Intel Core I7 60 No's
- 2. Epson S41 Projector -1
- 3. HP LaserJet 108W Utilized for IT Workshop Lab



<u>7. Computer Centre</u>

(Utilization Rate :100%):

This is common programming lab for all the branches of first year students.

- 1. Dell 3010 Desktop with Intel Core i3 - 80 No's
- 2. Epson S41 Projector 1
- 3. HP LaserJet 108W



Department Library

SI No	Particulars	Count
1	Total No. of Volumes	875
2	No. of Books Issued to the Students	138
3	No. of Books Issued to the Faculty	77
4	Available books in the Department Library	660



Technical Support

Name of the Technical Staff	Qualification	Designation	Laboratory Name
Shaik Rafi	MCA	Lab Technician	Computer Programming Lab-1
Shaik Vaseem Akram	MCA	Lab Technician	Computer Programming Lab-2
J Bala Raju	M.Tech	Lab Technician	Computer Programming Lab-3
P Y Vijaya Bhaskar	MCA	Lab Technician	Computer Programming Lab-4
M Kiran Kumar	B. Tech	Lab Engineer	Projects & PG Lab
K Mallikarjuna	MCA	Lab Technician	IT Workshop
V V Adhi Lakshmi	MCA	Lab Technician	Computer Center Lab



Criteria 7 Continuous Improvement

Improvement in Placements

Academic Year	2017-18	2018-19	2019-20	2020-21	Total
Number of Students Placed	54	97	108	112	371
Total Number of Offers	85	121	183	317	706

Improvement in Faculty Publications, Book Chapters and Patents

Academic Year	2017-18	2018-19	2019-20	2020-21	Total
Publications and Book Chapters	49	41	46	32	168
Patents	-	-	3	8	11



Overall Improvements

Parameters	B	Sefore 201	7	After 2017				
Student Quality		2016-17		2020-21				
Intake in UG	Sta	rted Rank- 93	341	S	tarted Rank-6687	,		
	Clos	sing Rank-51	076	CI	osing Rank-1674	8		
Number of Faculty		32			46			
Number of Faculty		_						
having Ph. D		6		11				
Average experience		4.0						
of the faculty		10		13				
Number of Labs /		00/250		7/470				
Computers		06/350		//4/0				
Faculty publications	International	International	Books	International	International	Books		
	/National	/National	/Book	/National	/National	/Book		
	Journals	Conferences	Chapters	Journals	Conferences	Chapters		
	113	51	5	162	55	6		
Faculty participation in FDPs		106		319				



Overall Improvements

Parameters	Before 2017	After 2017
FDPs / Workshops /		
Conferences	17	18
Conducted		
No. of Students		
Placed in Tier I	22	306
Company		
Students	A1	00
Publications	41	99
Internet Bandwidth	155Mbps	1 Gbps



PART – II : OBE Philosophy of the Department

A graduate of the Computer Science and Engineering Program Outcomes will demonstrate: **PROGRAM OUTCOMES:**

PO1: Engineering Knowledge

Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems

PO2: Problem Analysis

Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences

PO3: Design/Development of Solutions

Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations

PO4: Conduct Investigations of Complex Problems

Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions

PO5: Modern Tool Usage

Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations



OBE Philosophy of the Department (Contd..)

PO6: The Engineer and Society

Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice

PO7: Environment and Sustainability

Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development

PO8: Ethics

Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice

PO9: Individual and Team Work

Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings

PO10: Communication

Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions



OBE Philosophy of the Department (Contd..)

PO11: Project Management and Finance

Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments

PO12: Life-long Learning

Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change

PROGRAM SPECIFIC OUTCOMES

PSO1: Systems and Design Analysis

Students will have the ability to understand the principles and working of computer systems to assess the hardware and software aspects of computer systems.

PSO2 : Professional Skills

Students will have the ability to understand the structure and development methodologies of software system, that possess professional skills and knowledge of software design process.

PSO3: Products Innovations and Successful career

Students will have the ability to use knowledge in various domains to identify research gaps and hence to provide solution to new ideas and innovations



OBE Philosophy of the Department (Contd..)

PROGRAM EDUCATIONAL OBECTIVES (PEOs)

PEO – I : Excellence In Career

Pursue a successful career in the field of Computer Science & Engineering or a related field utilizing his/her education and contribute to the profession as an excellent employee, or as an entrepreneur

PEO- II: Enhance the Students Knowledge

Be aware of the developments in the field of Computer Science & Engineering; continuously enhance their knowledge informally or by pursuing graduate studies.

PEO- III: Products Innovations

Engage in research and inquiry leading to new innovations and products

PEO- IV: Communicative Work in Professional Environments

Be able to work effectively in multidisciplinary and multicultural environments.

PEO- V: Leadership and Contribution to Society

To be responsible members and leaders of their communities, understand the human, social and environmental context of their profession and contribute positively to the needs of individuals and society at large



OBE Philosophy of the Department (Contd..)

PEOs to POs Mapping



10/20/2021



Rajeev Gandhi Memorial College of Engineering & Technology (Autonomous)

Department of Computer Science & Engineering

RELATION BETWEEN THE POs and PEOs

	PEO I:	PEO II:	PEO III:	PEO IV:	PEO V:		
PEOs POs	Excellence in Care	Enhance the Students Knowledge	Products Innovations	Communicative Work in Professional Environments	Leadership and Contribution to Society		
PO1: Engineering knowledge	Н	Н	S	S	-		
PO2: Problem analysis	Н	S	S		-		
PO3: Design/development of solutions	S	S	S		-		
PO4: Conduct investigations of complex problems	S	S	S		-		
PO5: Modern tool usage	Н	Н	Н		S		
PO6: The engineer and society	S	S	Н		Н		
PO7: Environment and sustainability	S	-	Н		S		
PO8: Ethics			S	Н			
PO9: Individual and team work	S		Н	Н	Н		
PO10: Communication	S			Н	S		
PO11: Project management and finance		S	Н	S	S		
PO12: Life-long learning	Н	S	S	S	S		

Note : H: Highly Related; S: Supportive 10/20/2021



Rajeev Gandhi Memorial College of Engineering & Technology (Autonomous)

Department of Computer Science & Engineering

RELATION BETWEEN THE PSOs and PEOs

	PEO I:	PEO II:	PEO III:	PEO IV:	PEO V:	
PEOs POs	Excellence in Care	Enhance the Students Knowledge	Products Innovation s	Communicativ e Work in Professional Environments	Leadership and Contributio n to Society	
PSO1: Students will have the	Н	Н	S	S	-	
ability to understand the principles and working of computer systems to assess the hardware and software aspects of computer systems.						
PSO2: Students will have the ability to understand the structure and development methodologies of software system, that possess professional skills and knowledge of software design process	Н	S	S		-	
PSO3: Students will have the ability to use knowledge in various domains to identify research gaps and hence to provide solution to new ideas and NOTECY ALL PROVECTION PROVIDA PROVECTION PROVECTION PROVIDE PROVIDA PROVECTION PROVECTION PROVIDA PROVECTION PROVIDE PROVIDA PROVECTION PROVECTION PROVECTION PROVIDE PROVIDA PROVECTION PROVIDE PROVIDA PROVECTION PROVIDA PROVECTION PROVIDA PROVECTION PROVIDA 	S	S	S		-	



Dissemination of Vision, Mission and PEOs

- Vision statements are modified in the meeting of all stake holders to maintain consistency with the institute Vision.
- Modified Vision statements are displayed in the premises of department and awareness created among all stakeholders during BOS meeting and in regular teaching classes
- It is made regular practice to the Faculty and Students to maintain conversation about CO's and PO's mapping along with Vision & Mission Statements
- Vision, Mission and PEOs are published and disseminated among stake holders
- Communicated to the stakeholders through electronic media and meetings
- Published at departmental page of the website (https://www.rgmcet.edu.in/department-of-cse)
- > Displayed in classrooms, corridor, department office, department library and laboratories.







Assessment Methods for Measuring the Learning Outcomes

- i. Mid Semester Course Evaluation
- ii. End-of Semester Course Evaluation
- iii. Assignments
- iv. Laboratory and Project Works
- v. Technical Seminars
- vi. Comprehensive Viva
- vii. Course End Surveys
- viii. Program Exit Survey
- ix. Alumni Survey
- x. Employer Survey



Course Articulation Matrix	(Sample Course : Core Java	Programming (A0516154)
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Course Outcome Number	Course Outcome	P01	P02	PO3	P04	PO5	P06	PO7	PO8	PO9	P010	P011	P012	PSO1	PSO2	PSO3
CO1	Understand the syntax and concepts of JAVA	2	1	3	1	2				1		2	2	2	2	
CO2	Write JAVA programs to implementing Object Oriented Con.	2	1	3	2	2			1				3	1	2	1
CO3	Able to build directories and manage applications with interfaces	1	2	2	1	1							2		1	
CO4	Write JAVA programs that use data from flat files and databases	1	1	2	1	2			1			2	2		2	1
C05	Develop programs with error free and Multi-tasking.	2	2	2		2			1			1	2	2	2	
CO6	Program assignment utilizing Java GUI components, event listeners and event- handlers.		1	1		2							1		1	1



Calculate PO Attainment Using Course Articulation Matrix and CO Attained Values

COs	CO Attainment Value	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	7 Oq	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
CO 1	2.65	2	1	3	1	2				1		2	2	2	2	
CO 2	2.63	2	1	3	2	2			1				3	1	2	1
CO 3	2.65	1	2	2	1	1							2		1	
CO 4	2.65	1	1	2	1	2			1			2	2		2	1
CO 5	2.66	2	2	2		2			1			1	2	2	2	
CO 6	2.60		1	1		2							1		1	1
CJP(A	0516154)	2.65	2.64	2.64	2.64	2.64	-	-	2.65	2.65	-	2.65	2.64	2.65	2.64	2.63



PO Attainments Through Direct Assessment (2019-20)

COURSE	CODE	P01	P02	PO3	P04	PO5	P06	P07	P08	60d	P010	P011	P012	PS01	PSO2	PSO3
Discrete Mathematics	A0512153	2.72	2.72	2.71	2.72	2.71	2.72	-	2.72	2.72	2.71	-	2.72	2.7	2.71	2.72
Probability and Statistics	A0012156	2.69	2.65	2.63	-	2.56	-	-	-	-	2.69	-	2.56	-	2.56	2.68
			••••			••••	:		:	:					:	:
Core Java Programming	A0516154	2.65	2.64	2.64	2.64	2.64	-	-	2.65	2.65	-	2.65	2.64	2.65	2.64	2.63
Formal Languages and Automata Theory	A0517154	2.34	2.4	2.32	2.45	2.23	-	-	-	2.42	-	2.41	2.32	2.34	2.38	2.41
				:	:		:	:	:	:	:	:	:	:	:	:
Overall PO Attainment (Average of POs)		2.59	2.59	2.6	2.59	2.6	2.59	2.64	2.63	2.63	2.63	2.6	2.6	2.59	2.59	2.6



PO Attainments – Direct and Indirect Assessment (Academic Year: 2019-20)

S No	Assessment Components (Direct + Indirect)		Program Specific Outcomes													
		P01	P02	P03	P04	PO5	P06	P07	P08	60d	P010	P011	P012	PSO1	PSO2	PSO3
1	Direct Assessment	2.59	2.59	2.59	2.58	2.59	2.59	2.63	2.63	2.63	2.63	2.6	2.6	2.59	2.59	2.6
2	Course End Survey	2.9	2.9	2.9	2.8	2.9	2.7	2.8	2.9	2.8	2.7	2.8	2.8	2.9	2.8	2.8
3	Program Exit Survey	2.9	2.9	2.9	2.8	2.7	2.8	2.8	2.7	2.7	2.8	2.9	2.8	2.8	2.9	2.9
4	Alumni Survey	2.8	2.9	2.8	2.9	2.8	2.9	2.8	2.7	2.7	2.7	2.9	2.9	2.9	2.9	2.8
5	Employer Survey	2.8	2.8	2.7	2.9	2.8	2.7	2.8	2.8	2.9	2.9	2.8	2.7	2.8	2.7	2.8
Final atta direct ass Course El Program 2.5% of 2 5% of E	ainment = 80% of sessment + 10% of nd Survey + 5% of Exit Survey + Alumni Survey + mplover Survey	2.65	2.65	2.64	2.63	2.64	2.62	2.66	2.67	2.66	2.65	2.65	2.64	2.64	2.64	2.65



PO Attainments – Direct and Indirect Assessment (Academic Year: 2019-20)





PO Attainments – Direct and Indirect Assessment (Academic Year: 2018-19)

S No	Assessment Components (Direct + Indirect)			Program Specific Outcomes												
		P01	P02	P03	P04	PO5	P06	P07	P08	60d	P010	P011	P012	PSO1	PSO2	PSO3
1	Direct															
	Assessment	2.49	2.48	2.46	2.44	2.48	2.50	2.48	2.50	2.48	2.50	2.46	2.47	2.46	2.49	2.49
2	Course End Survey	2.74	2.76	2.79	2.78	2.62	2.63	2.61	2.61	2.64	2.59	2.61	2.58	2.56	2.77	2.71
2	Program Exit															
5	Survey	2.47	2.79	2.62	2.53	2.85	2.66	2.71	2.78	2.57	2.69	2.61	2.70	2.79	2.79	2.71
4	Alumni Survey	2.30	2.60	2.51	2.74	2.58	2.77	2.66	2.66	2.96	2.70	2.62	2.74	2.77	2.81	2.89
5	Employer Survey	2.92	2.92	2.84	2.84	2.84	2.84	2.92	2.92	2.84	2.84	2.76	2.84	3	2.92	2.76
Final atta	ainment = 80% of															
direct ass	sessment + 10% of															
Course End Survey + 5% of		2 5 2	2 5 4	2 51	2 50	2 52	2 5 4	2 52	2 5 4	2 5 2	2 5 2	2 40	2 51	2 5 1	2 55	2 54
Program	Exit Survey +	2.52	2.54	2.51	2.50	2.52	2.54	2.52	2.54	2.52	2.53	2.49	2.51	2.51	2.55	2.54
2.5% of	Alumni Survey +															
2.5% of E																



PO Attainments – Direct and Indirect Assessment (Academic Year: 2018-19)





PO Attainments – Direct and Indirect Assessment (Academic Year: 2017-18)

S No	Assessment Components (Direct + Indirect)	Program Outcomes														Program Specific Outcomes		
		P01	P02	PO3	P04	50d	90d	707	P08	60d	PO10	P011	P012	PSO1	PSO2	PSO3		
1	Direct Assessment	2.61	2.60	2.58	2.57	2.61	2.60	2.58	2.57	2.60	2.58	2.58	2.61	2.59	2.61	2.60		
2	Course End Survey	2.77	2.77	2.79	2.76	2.70	2.68	2.67	2.67	2.62	2.57	2.58	2.67	2.73	2.77	2.73		
3	Program Exit Survey	2.40	2.63	2.48	2.58	2.74	2.49	2.43	2.73	2.84	2.63	2.56	2.50	2.70	2.60	2.46		
4	Alumni Survey	2.28	2.58	2.50	2.65	2.50	2.85	2.65	2.70	3.00	2.70	2.75	2.75	2.80	2.85	2.85		
5	Employer Survey	2.79	3.00	2.89	3.00	2.58	2.89	2.89	2.79	2.79	2.68	2.79	2.79	2.79	2.79	2.89		
Final attainment = 80% of direct assessment + 10% of Course End Survey + 5% of Program Exit Survey + 2.5% of Alumni Survey +		2.61	2.63	2.60	2.60	2.62	2.62	2.59	2.60	2.63	2.59	2.59	2.62	2.62	2.64	2.62		
2.5% of E																		



PO Attainments – Direct and Indirect Assessment (Academic Year: 2018-19)




Rajeev Gandhi Memorial College of Engineering & Technology (Autonomous) Department of Computer Science & Engineering

Any Suggestions THANK YOU