KAKATIYA INSTITUTE OF TECHNOLOGY & SCIENCE

(An Autonomous Institute under Kakatiya University, Warangal, Telangana)

Welcome to
The Chairman & Members of
N.B.A. Expert Committee
07.03.2025

Dr. V. Venkateshwar Reddy

Assoc. Professor & Head

Dept. of ECE

Outline

- Department Profile
- Vision, Mission & Program Educational Objectives
- Criteria 1: Program Curriculum and Teaching – Learning Processes
- Criteria 2: Program Outcomes and Course Outcome
- Criteria 3: Students' Performance
- Criteria 4: Faculty Contributions
- Criteria 5: Laboratories and Research Facilities
- Criteria 6: Continuous Improvement
- Budget Details
- SWOC Analysis
- Alumni details

INTRODUCTION

Department of Electronics and Communication Engineering

S. No	Programme	Specialization	Year	Intake
1	B. Tech	Electronics and Communication Engineering	2000	40
2	B. Tech	Electronics and Communication Engineering	2001	60
3	B. Tech.	Electronics and Communication Engineering	2009	90
4	B. Tech.	Electronics and Communication Engineering	2011	120
5	B. Tech.	Electronics and Communication Engineering	2015	180
6	M. Tech	Communication Engineering & Signal Processing	2020	30
7	M. Tech	Communication Engineering & Signal Processing	2021	12

NBA Accreditation

S. No	Programme	Year of Accreditation (NBA)	File No./Letter No. of accreditation
1	B. Tech (ECE)	2003	2003 for 3 years vide letter No:F.No.NBA/ACCR-190/2003, Dt:07.05.2003
2	B. Tech (ECE)	2008	2008 for 3 years vide letter No:F.No./NBA/ACCR/15-2001, Dt:19.07.2008
3	B. Tech (ECE)	2014	2014 for 2 years vide letter No:F.No. 11-76/2010/NBA, Dt:08.07.2014
4	B. Tech (ECE)	2016	2016 for 1 years vide letter No:F.No. 11-76/2010/NBA, Dt:08.07.2016
5	B. Tech (ECE)	2018	2018 for 3 years vide letter No:F.No. 11-76/2010/NBA, Dt:29-03-2018
6	B. Tech (ECE)	2020	2020 for 1 years vide letter No:F.No. 11-76/2010/NBA, Dt:21.08.2020
7	B.Tech (ECE)	2021	2021 for 3 years vide letter No:F.No. 11-76/2010/NBA, Dt: 17.02.2021
8	B.Tech (ECE)	2024	2024 for 3 years vide letter No:F.No. 11-76/2010/NBA, Dt: 05.04.2024

Teaching and Non-teaching Staff

A.Y. 2024-25 (CAY)	
Teaching and Non-teaching Staff	Number
Professors	03
Associate Professors	07
Assistant Professors	22
Total Teaching Faculty	32 (with 19 PhD's)
Total Technical & Office Staff	09
Total	41

A.Y. 2023-24 (CAYm1)	
Teaching and Non-teaching Staff	Number
Professors	03
Associate Professors	08
Assistant Professors	22
Total Teaching Faculty	33 (with 17 PhD's)
Total Technical & Office Staff	09
Total	42

VISION, MISSION & PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

VISION OF THE DEPARTMENT

Develop the department into a full-fledged center of learning in various fields of Electronics and Communication Engineering in pursuit of excellence in Education, Research, Entrepreneurship and Technological services to the society.

MISSION OF DEPARTMENT

M1: Imparting quality education to develop innovative and entrepreneurial professionals fit for globally competitive environment.

M2: To nurture the students in the field of Electronics and Communication Engineering with an overall back-ground suitable for attaining a successful career in higher education, research and Industry

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

The postgraduates of Communication Engineering and Signal Processing will be able to…		
PEO1	**(Research and Innovation)**	*engage in research, innovation and in teaching in Higher Education institutions*
PEO2	**(Technical expertise and Successful career)**	*excel in profession in industry, and entrepreneurship with updated technologies in signal processing, wireless technologies domains.*
PEO3	**(Soft skills and Lifelong learning)**	*exhibit professional ethics, effective communication and teamwork in solving engineering problems by adapting contemporary research towards sustainable development of society*

DEPARTMENT ACHIEVEMENTS/RECOGNITIONS

Recognized as a Research Centre by Kakatiya University (03.05.2024)
https://drive.google.com/file/d/1zaggaCVgks7Gb2_9RReqU9k-F9J7JCyI/view?usp=sharing
No of faculty recognized as Research supervisors - 08

Center of Excellence (CoE) (03)

- Technology Innovation & Incubation Center (TIIC)
- Transfinite iLab
- BLACKBUCK Engineers

Weblink for CoE: https://www.kitsw.ac.in/academy_info.html

Organized 3 - International conferences

- Organized Springer 5th international conference on Computer and Communication technologies **(IC3T-2023)** on 6-7 Oct., 2023.
- Organized Springer 4th international conference on Computer and Communication technologies **(IC3T-2022)** on 29-30 July., 2022.
- Organized Springer international conference on Data Engineering and Communication technologies **(ICDECT-2021)** on 28th -29th August., 2021.

Fund raised by Alumni of ECE Alumni Funded Lab

Alumni contributed an amount of **Rs. 2,95,584** to establish "ECE Alumni Funded Laboratory". https://alumni.kitsw.ac.in/funds/view/223.dz

FACULTY ACHIEVEMENTS/RECOGNITIONS

Grants Received by the faculty (During the assessment period)

S.No.	Name of the Faculty	Title of the project/FDP/STTP	Name of the funding agency	Amount in Rs.
1	Dr. K. Ashoka Reddy	Development of artificial intelligence and IoT based portable Knee joint health care monitoring system for rural India	DST-SERB-Core Research Grant (vide File No: CRG/2022-23/004501)	38.61 Lakhs
2	Dr.V. Raju	Real time parking space identification using computer vision in smart cities	MSME (vide File No: 6-19/Sanction to CAN/ incubation/2022-23)	16.40 Lakhs
3.	Dr. K. Sowjanya	Fund for Science & Engineering research to attend the IEEE Region 10 Technical Conference (TENCON) - Thailand	DST - SERB (File Number: ITS/2023/004330)	0.44 Lakhs
Total				55.45 Lakhs

Previous - Grants Received by the faculty

S.No.	Title of the project/FDP/STTP	Name of the funding agency	Amount in Rs.
1	Design and Development of Printed Micro strip Antennas for LTE and GPS applications	DST-SERB-EEQ (vide File No: EEQ/2017/000118; dated 29.11.2017)	41,36,000.00
2	FDP on "Hands on approach of OFDM system designing in MATLAB"	AICTE (File No.6-38/RFID/FDP/P-1/2016-17 ; dated 06.06.2017)	6,57,775.00
3	FDP on "Hands on project based approach for biomedical signal analysis using Matlab"	AICTE (F.No-34-67/22/FDC/FDP/P-1/2019-20; dated 30.07.2020)	5,54,000 .00
4	STTP on "Hands on project based approach for 5G design and development using Matlab"	AICTE (F.No.34-66/420/FDC/STTP/Policy-1/2019-20; dated:10.08.2020)	3,41,333.00
5	MODROBS for Pulse and Digital Circuits lab	AICTE (F.No. 9-176/IDC/MODROB/Policy-1/2019-20; dated 20.07.2020)	6,78,431.00
6	Seminar grant on "Deep Learning for Engineering Applications "	DST SERB (File No: DST/ICPS/SCST/2019/639; dated 31.03.2019)	7,00,000.00
Total			70,67,539.00

FACULTY ACHIEVEMENTS/RECOGNITIONS

Consultancy Work(During the assessment period)

S.No	Title of the Consultancy Project	Name of the Company	Amount in Rs.
1	Mobile-Based Agriculture Motor Controller	**Elegant Embedded Solutions Pvt. Ltd., Hyderabad**	**6 Lakhs**
2	Automated Conveyor Belt Sorting System	**Multitech Systems, Hyderabad**	**5 Lakhs**
Total			**11 Lakhs**

Faculty Publications:

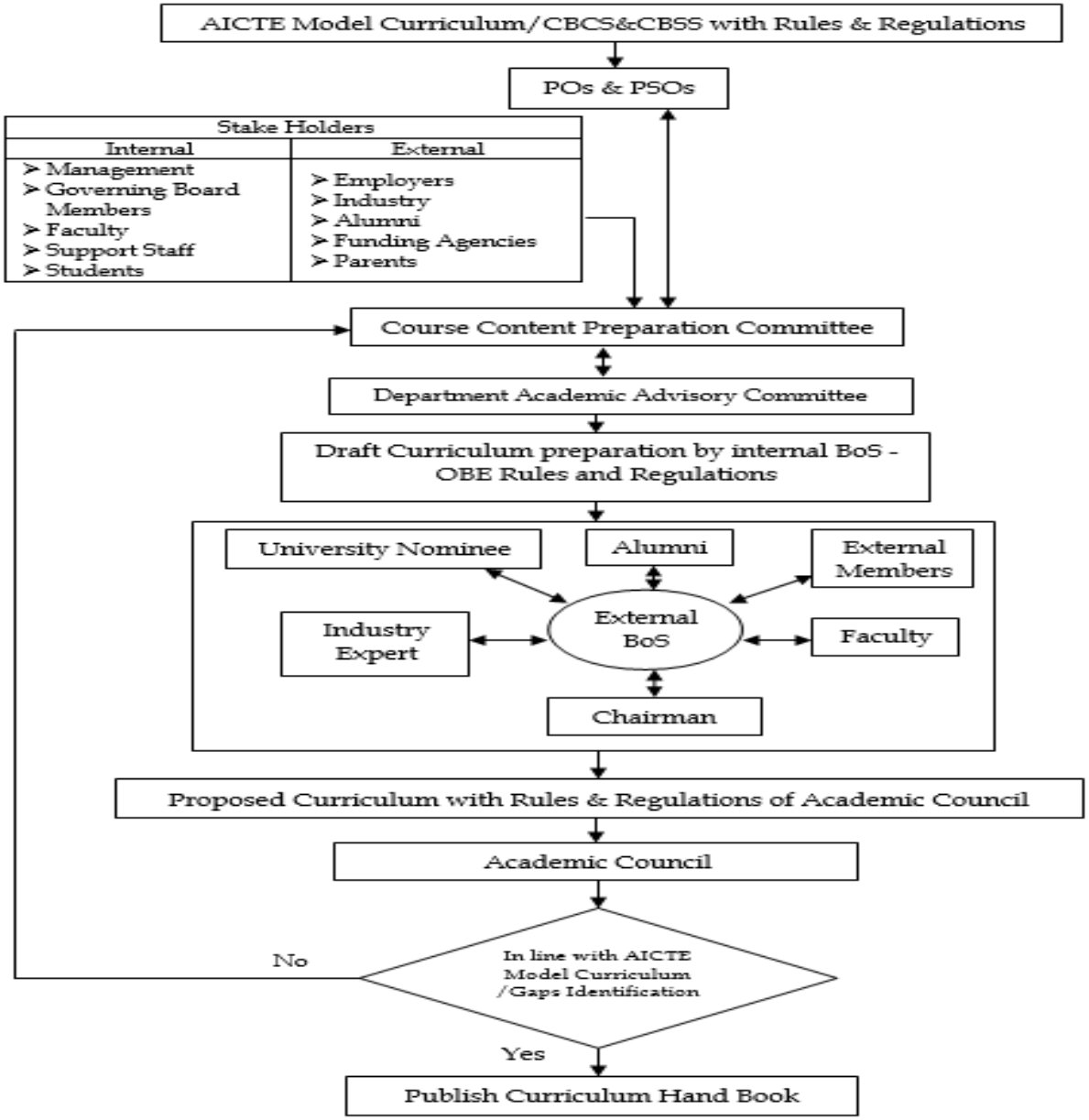
Academic Year	SCI	Scopus	UGC	Conferences	Books And Book Chapters	Patents
2024-25	04	02	0	2	0	01
2023-24	13	19	0	24	11	03
2022-23	08	10	05	30	09	03
2021-22	11	08	08	36	07	05
Total	36	39	13	92	27	12

H-index of the department : 4.21

Faculty Awards

S.No.	A.Y	Name	Award	Details
1	2024-25	Dr. D. Venu	Certificate of Appreciation received from NPTEL	Instrumental role as SPOC for the NPTEL local chapter
2	2024-25	Dr. Azmeera Srinivas	Elite+Silver	Topper of 5% in Digital Circuits
3	2022-23	Azmeera Srinivas	Elite+Silver	Topper of 2% in Python for Data Science
4	2022-23	Dr Veerati Raju	Elite+Silver	Topper of 5% in Introduction to Internet of Things
5	2022-23	Birru Neerajakshi	Elite+gold	Topper of 5% in Foundation of Cloud IoT Edge ML
6	2021-22	Dr. R. Prashanth	Young faculty in Electronics and communication Engineering	Venus international foundation, chennai
7	2020-21	Dr. B. Dhanalaxmi	Best Women Scientist	Novel Research Academy, Puducherry
8	2020-21	Dr. R. Prashanth	Best Young scientist	Novel Research Academy, Puducherry

Process for designing program curriculum



Participation of Industry professionals in curriculum development

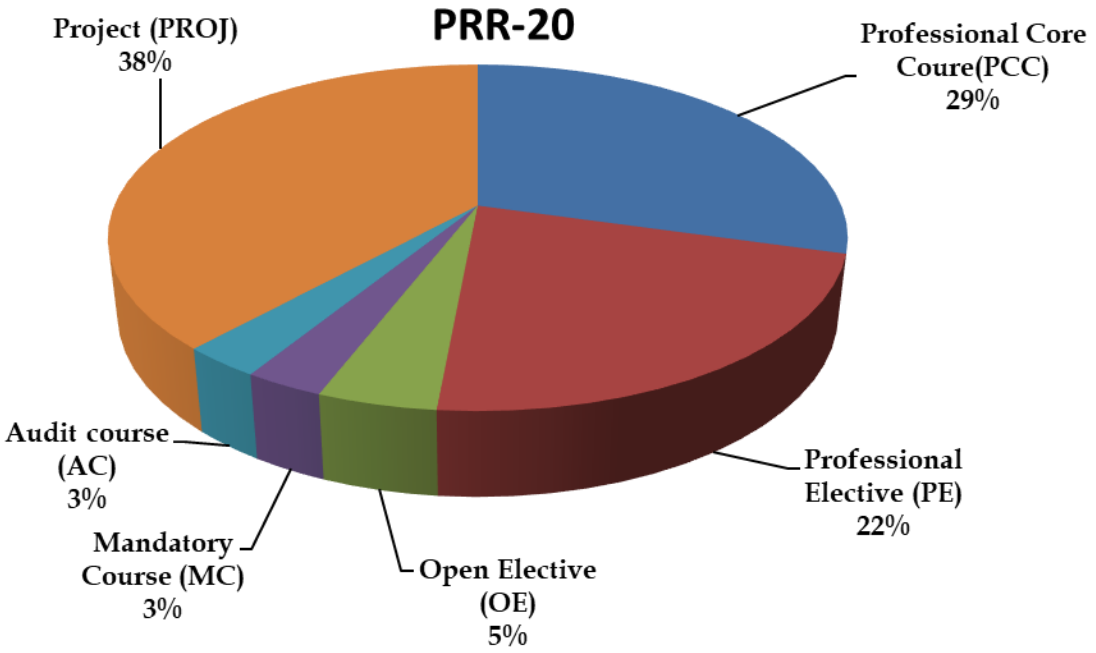
S. No.	Name of the Member	Designation	Position in BoS
1.	Dr. B. Rama Devi	*HoD ECE, KITSW*	Chairperson, BoS
2.	Dr. K. Ashoka Reddy	*Senior Professor of ECE Dept. KITSW*	*Member*
3.	Dr. G. Raghotham Reddy	*Professor of ECE Dept. KITSW*	*Member*
4	S. P. Girija	*Assoc. Prof. of ECE Dept. KITSW*	*Member*
5.	E. Suresh	*Assoc. Prof. of ECE Dept. KITSW*	*Member*
6.	Surya Kanth V Gangashetty svg@iiit.ac.in suryakanthvgangashetty@gmail.com 9494838278	*Professor,* ***IIIT, Hyderabad,***	*External Member* *(from renowned Academic Institute)*
7.	Dr.L.Anjaneyulu anjan@nitw.ac.in 8332969355, 9490378430	*Professor & Head, Dept. of ECE,* ***NIT, Warangal***	*External Member* *(from renowned Academic Institute)*
8.	Prof. T. Srinivasulu drstadisetty@gmail.com 9542155393 7013489635	*Professor in ECE* *Department of Electronics and Communication Engineering* ***Kakatiya University College of Engineering and Technology,*** *Kakatiya University, Warangal-506009, India.* *Dean (Faculty of Engineering & Technology),* ***Kakatiya University.***	*External Member (University Nominee)*
9.	Ramesh Guptha Guntha rgguntha@qti.qualcomm.com 9160553030	*Senior Staff Engineer Manager,* ***Qualcomm***	*External Member (from Industry)*
10.	Dr. Y. Jagan Mohan Reddy jaganmohan.reddy@honeywell.com 7680076690	*Senior Engineering Manager,* ***Honeywell Technology Solutions Labs Pvt Ltd****, Hyderabad*	*External Member (from Industry)*
11.	Dr. G Sanath Kumar 9908211787 citdcadcam@citdindia.org dy.directortrg@citdindia.org	*Deputy Director, Central Institute of Tool Design* ***(CITD),*** *Hyderabad*	*External Member (from Industry)*
12.	V.Madhan Kumar 9966199305 madan454@gmail.com	*Lead Physical Design Engineer,* ***Cerium Systems Pvt Ltd****, Bangalore* *(M.Tech 2009-11)*	*External Member* *(Post Graduate Meritorious Alumnus – Academia/Industry)*
13.	A.Vijaya	*Assoc. Prof. of ECE Dept. KITSW*	*Co-Opted Member-1*
14.	Dr. M. Raju	*Assoc. Prof. of ECE Dept. KITSW*	*Co-Opted Member-2*
15.	Dr. V.Venkateshwar Reddy	*Assoc. Prof. of ECE Dept. KITSW*	*Co-Opted Member-3*

State the components of the curriculum

Semester Vs course category weightage -PRR-20

Semester	MC	PC	PE	OE	PROJ	AC	TOTAL
I	**1/2**	**4/10**	**2/6**	**-**	**-**	**1/1**	8/19
II	**-**	**4/10**	**2/6**	**-**	**1/2**	**1/1**	8/19
III	**-**	**-**	**1/3**	**1/3**	**2/9**	**-**	4/15
IV	**-**	**-**	**-**	**-**	**1/15**	**-**	1/15
Total	1/2	8/20	5/15	1/3	4/26	2/2	21/68
% Weightage of Course Category	2.94 % (2/68)	29.41 % (20/68)	22.05 % (15/68)	4.41 % (3/68)	38.23 % (26/68)	2.94 % (2/68)	100 % (68/68)

**MC:Mandatorycourse*PC:ProfessionalCore*
**PE:ProfessionalElective*OE:Openelective*AC:Auditcourse*
#As per AICTE Model curriculum



Teaching-Learning Processes

The academic activities of the college are regulated by the Institute Academic Advisory Committee (AAC) consisting of all the Heads of the Departments & Deans with Principal as its Chairperson.

Activities of Teaching & Learning process

- Timely preparation of lecture schedules (OBLS)
- Preparation of Table of Specifications (ToS)
- Tutorials and Assignments
- Evaluation of Assignments
- Minor Examinations
- Monitoring Attendance
- Information to the parents regarding attendance and academic performance through Counselors

Teaching-Learning Processes

- Mid Semester Examinations
- Result Analysis-Cognitive Domain Attainment Level (CDAL), Course Outcome Attainment Level (COAL)
- End semester Examinations
- Planned laboratory work
- Continuous Evaluation in laboratory classes
- Question paper setting is according to ToS and revised Blooms taxonomy.
- Integrating Innovation Incubation Research and Entrepreneurship (I2RE) into course teaching
- Special assignments on Course Research Papers (CRP) and Course Patents (CP)
- Tutorial Classes
- Course research projects / Poster presentation
- MOOCs online courses
- Mandatory Internships and Evaluation

Teaching-Learning Processes

The marks allotment for different components under CIE & ESE is shown below:

PRR–20(Continuous Internal Evaluation) (Marks)				Marks	Minimum marks
MSE–1		20 Marks	(70%ofthebestofMSE- I&MSE-II marks) + (30% of the other MSE marks)	20 Marks	07/20
MSE–2		20 Marks			
Minor–1		10 Marks	Average of M-I & M-II marks	10 Marks	04/10
Minor–2		10 Marks			
Assignment–1		08 Marks	Average of A-I & A-II marks	08 Marks	10/30
Assignment–2		08 Marks			
Special Assignments	CRP-1	04 Marks	Two-page summary Report on course research paper-I	04 Marks	
	CRP-II	04 Marks	Two-page summary Report on course research paper-II	04 Marks	
	CP-I	04 Marks	Two-page summary Report on course patent-I	04 Marks	
	CP-II	04 Marks	Two-page summary Report on course patent-II	04 Marks	
Course Presentations: CRP-I/CP-I/CRP-II/CP-II/Course Project presentation/Business Idea		06 Marks	PPT Presentation and viva-voce	06 Marks	
PRR-20 End Semester Examination (ESE)				40 Marks	14/40
Total				100 Marks	35/100

**CRP- Course Research Paper, CP-Course Patent*

Criterion 2: Program Outcomes and Course Outcome

PROGRAM OUTCOMES (POs)

At the time of graduation, **the post graduates of Communication Engineering and Signal Processing program** will be able to …	
PO1	*independently carry out research /investigation and development work to solve practical problems.*
PO2	*write and present an effective technical report/document.*
PO3	*Demonstrate competence in the area of communication engineering and signal processing*

PROGRAM SPECIFIC OUTCOMES (PSOs)

PSO1: apply knowledge of signal processing, embedded systems, communication systems, artificial intelligence & machine learning and wireless technologies for development of effective and innovative solutions to engineering problems.

PSO2: apply appropriate methodology, contemporary hardware and software tools to solve complex engineering problems related to signal processing, embedded systems, communication systems, artificial intelligence & machine learning and wireless technologies.

Course Outcomes (COs) with CO-PO mapping

Course Name	Course Code	Course outcomes *After completion of the course, the student will be able to*
ADVANCED COMMUNICATION THEORY	P20SP101.1	inspect coherent and noncoherent detection in white and colored Gaussian noise
	P20SP101.2	analyze linear and nonlinear modulation schemes in frequency-flat channels
	P20SP101.3	examine the signal detection in frequency-selective channels
	P20SP101.4	analyze MIMO channel capacity and linear and nonlinear detection schemes in MIMO systems

Course Outcomes (COs) Mapping with POs & PSOs

Course Articulation Matrix (CAM): P20SP101 ADVANCED COMMUNICATION THEORY						
CO		PO1	PO2	PO3	PSO1	PSO2
CO1	P20SP101.1	2	1	2	2	2
CO2	P20SP101.2	2	1	2	2	2
CO3	P20SP101.3	2	1	2	2	2
CO4	P20SP101.4	2	1	2	2	2
P20SP101		**2**	**1**	**2**	**2**	**2**

1: Slight (Low) *2: Moderate (Medium)* *3:Substantial(High)*

Course Outcomes (COs) Mapping with POs & PSOs of PRR20 Courses

Attainment of Course Outcome

Tools for assessment of programme outcomes

- Direct Assessment
- Indirect Assessment

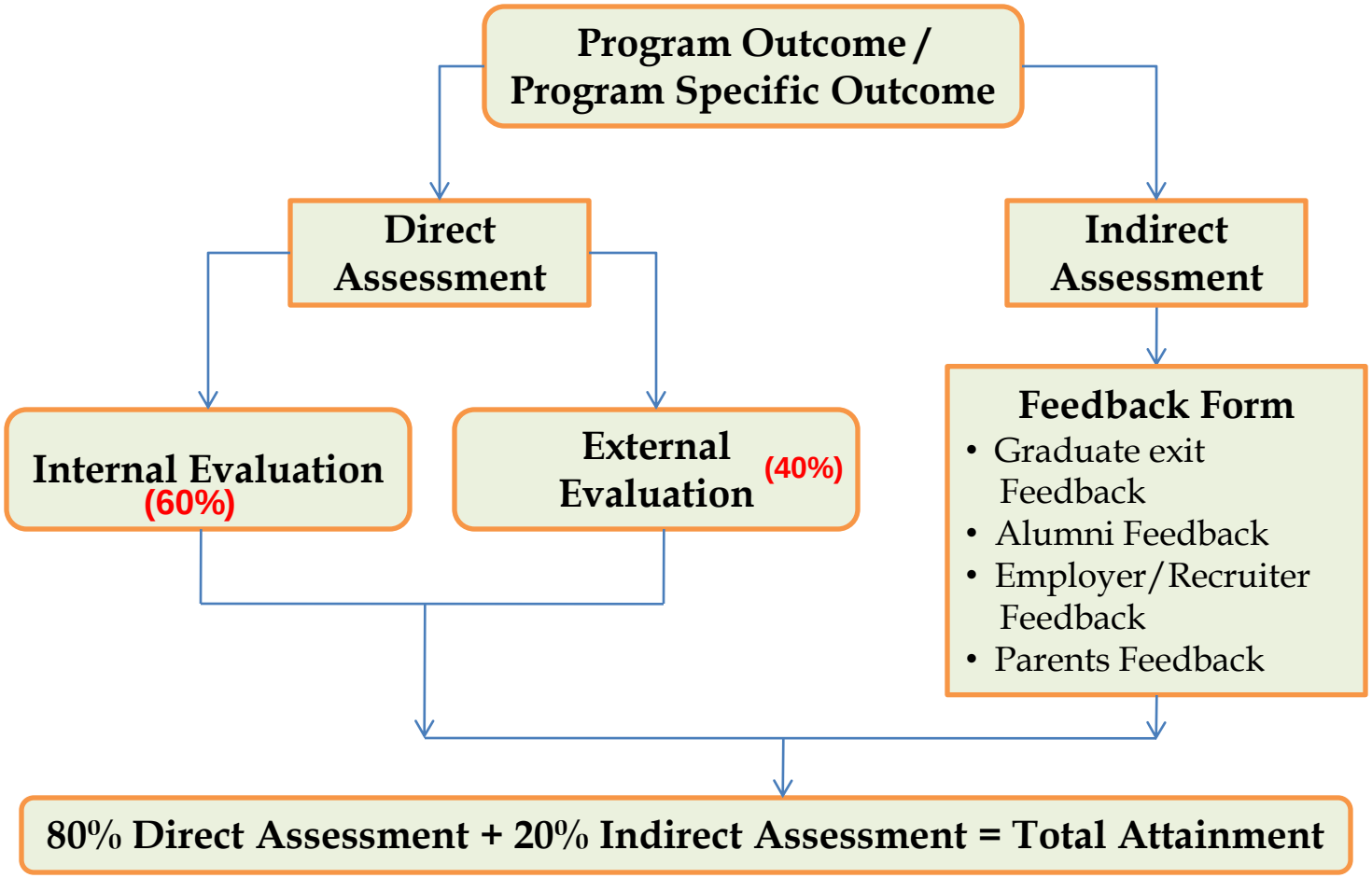
Direct Assessment Tools

- Minor Examination
- Special Assignments
- Mid Semester Examination
- End Semester Examination
- Seminars
- Project Presentations
- Laboratory courses
- Continuous Internal Evaluation (CIE) for Project Work

Indirect Assessment Tools

- Graduate Exit Feedback
- Alumni feedback
- Employer feedback
- Parents feedback

Process of Attaining of POs & PSOs



Calculation Methodology for Attainment Levels

DIRECT ATTAINMENT-STUDENTS PERFORMANCE

CALCULATION METHODOLOGY FOR ATTAINMENT LEVELS

1. List out the internal and external marks of all the students
2. Calculate the average of the total students marks.
3. Identify the threshold value (Th=50% of the Maximum Marks)
4. List out the number of students who secured greater than the threshold value (Th=50% of the Maximum Marks) (A)
5. Total No. of Students (B)

Percentage of students secured greater than threshold is calculated by C:

$$C = [(A/B) \times 100] \%$$

Calculation Methodology for Attainment Levels

DIRECT ATTAINMENT-STUDENTS PERFORMANCE

Based on above value the attainments are obtained as below:

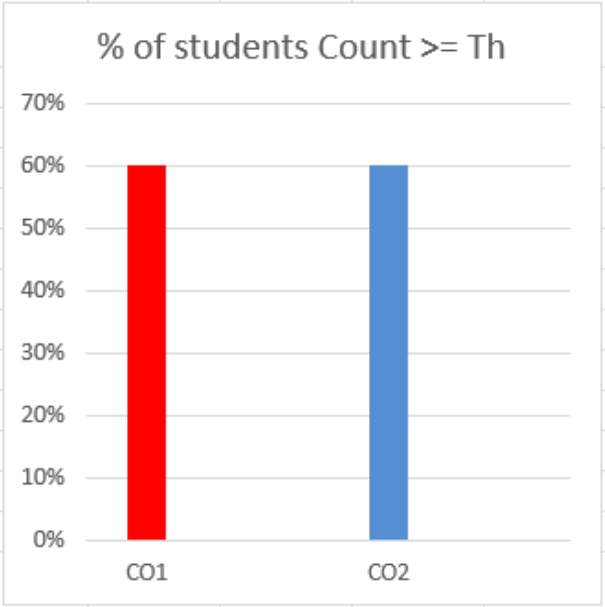
- Attainment Level 0: less than 60% students scoring less than threshold marks or set attainment level in the final examination.
- Attainment Level 1: 60% students scoring more than threshold marks or set attainment level in the final examination.
- Attainment Level 2: 70% students scoring more than threshold marks or set attainment level in the final examination.
- Attainment Level 3: 80% students scoring more than threshold marks or set attainment level in the final examination

MSE 1 CO-Attainment Calculation of ACT Course

ABSTRACT ON COURSE OUTCOME ATTAINMENT LEVEL

CESP M.TECH. I SEMESTER 2021-2023 P20SP101-ADVANCED COMMUNICATION THEORY

Total number of students	5	
course outcome	CO1	CO2
Maximum marks	15	15
Threshold(Th) (Th=50% of maximum marks)	7.5	7.5
No.of students Count >= Th	3	3
% of students Count >= Th	60%	60%
course outcome Attainment level (COAL)	1	1
course outcome Attainment level=1	If 60% of students Count >= Th	
course outcome Attainment level=2	If 70% of students Count >= Th	
course outcome Attainment level=3	If 80% of students Count >= Th	



ABSTRACT ON COGNITIVE DOMAIN ATTAINMENT LEVEL

CESP M.TECH. I SEMESTER 2021-2023 P20SP101-ADVANCED COMMUNICATION THEORY

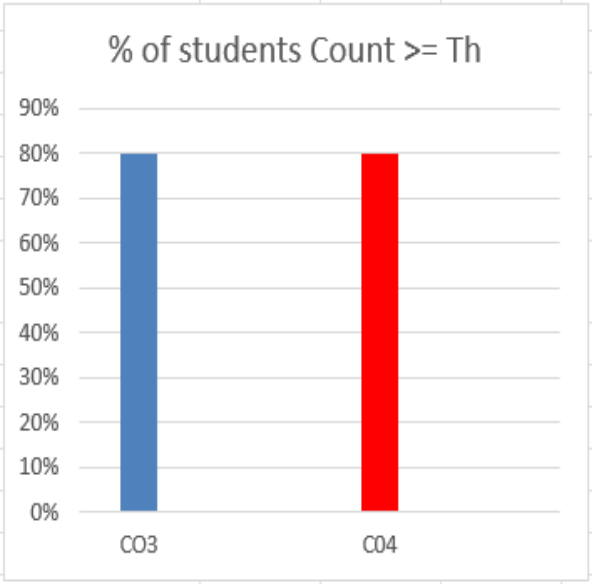
Total number of students	5			
COGNITIVE DOMAIN ATTAINMENT LEVEL	**R**	**U**	**Ap**	**An**
Maximum marks	4	2	12	12
Threshold(Th) (Th=50% of maximum marks)	2	1	6	6
No.of students Count >= Th	3	3	3	2
% of students Count >= Th	60%	60.00%	60.00%	40.00%
course outcome Attainment level (COAL)	1	1	1	0
course outcome Attainment level=1	If 60% of students Count >= Th			
course outcome Attainment level=2	If 70% of students Count >= Th			
course outcome Attainment level=3	If 80% of students Count >= Th			

MSE 2 CO-Attainment Calculation

ABSTRACT ON COURSE OUTCOME ATTAINMENT LEVEL

CESP M.TECH. I SEMESTER 2021-2023 P20SP101-ADVANCED COMMUNICATION THEORY

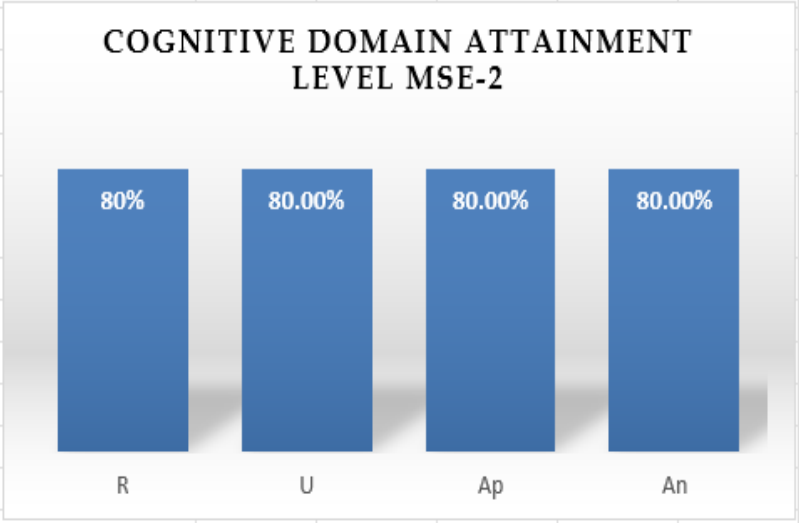
Total number of students	5	
course outcome	CO3	C04
Maximum marks	15	15
Threshold(Th) (Th=50% of maximum marks)	7.5	7.5
No.of students Count >= Th	4	4
% of students Count >= Th	80%	80%
course outcome Attainment level (COAL)	3	3
course outcome Attainment level=1	If 60% of students Count >= Th	
course outcome Attainment level=2	If 70% of students Count >= Th	
course outcome Attainment level=3	If 80% of students Count >= Th	



ABSTRACT ON COGNITIVE DOMAIN ATTAINMENT LEVEL

CESP M.TECH. I SEMESTER 2021-2023 P20SP101-ADVANCED COMMUNICATION THEORY

Total number of students	5			
COGNITIVE DOMAIN ATTAINMENT LEVEL	**R**	**U**	**Ap**	**An**
Maximum marks	3	3	12	12
Threshold(Th) (Th=50% of maximum marks)	1.5	1.5	6	6
No.of students Count >= Th	4	4	4	4
% of students Count >= Th	80%	80.00%	80.00%	80.00%
course outcome Attainment level (COAL)	3	3	3	3
course outcome Attainment level=1	If 60% of students Count >= Th			
course outcome Attainment level=2	If 70% of students Count >= Th			
course outcome Attainment level=3	If 80% of students Count >= Th			

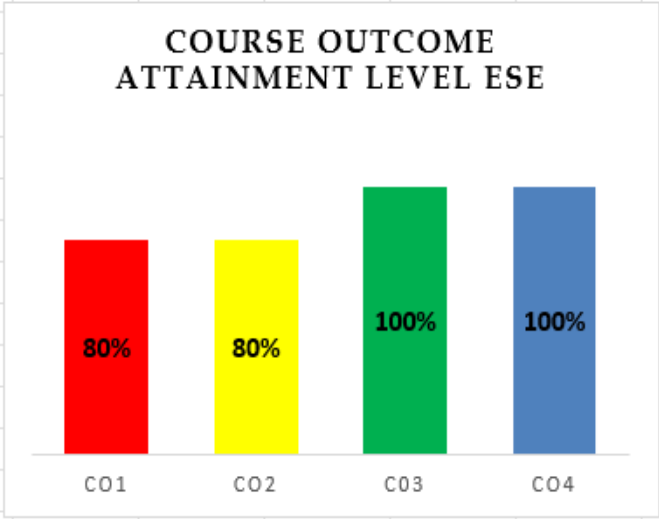


ESE CO-Attainment calculation

ABSTRACT ON COURSE OUTCOME ATTAINMENT LEVEL

E_ CESP M.TECH. I SEMESTER 2021-2023 P20SP101-ADVANCED COMMUNICATION THEOI

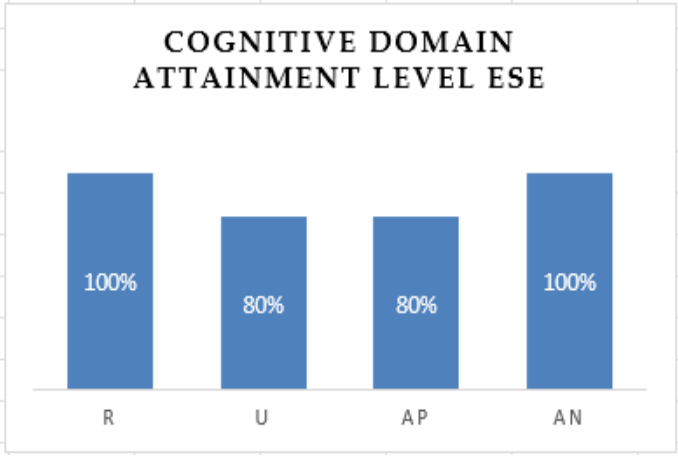
Total number of students	5			
course outcome	CO1	CO2	CO3	CO4
Maximum marks	15	15	15	15
Threshold(Th) (Th=50% of maximum marks)	7.5	7.5	7.5	7.5
No.of students Count >= Th	4	4	5	5
% of students Count >= Th	80%	80%	100%	100%
course outcome Attainment level (COAL)	3	3	3	3
course outcome Attainment level=1	If 60% of students Count >= Th			
course outcome Attainment level=2	If 70% of students Count >= Th			
course outcome Attainment level=3	If 80% of students Count >= Th			



ABSTRACT ON COGNITIVE DOMAIN ATTAINMENT LEVEL

SE_CESP M.TECH. I SEMESTER 2021-2023 P20SP101-ADVANCED COMMUNICATION THEOF

Total number of students	5			
COGNITIVE DOMAIN ATTAINMENT LEVEL	R	U	Ap	An
Maximum marks	4	24	12	20
Threshold(Th) (Th=50% of maximum marks)	2	12	6	10
No.of students Count >= Th	5	4	4	5
% of students Count >= Th	100%	80%	80%	100%
course outcome Attainment level (COAL)	3	3	3	3
course outcome Attainment level=1	If 60% of students Count >= Th			
course outcome Attainment level=2	If 70% of students Count >= Th			
course outcome Attainment level=3	If 80% of students Count >= Th			



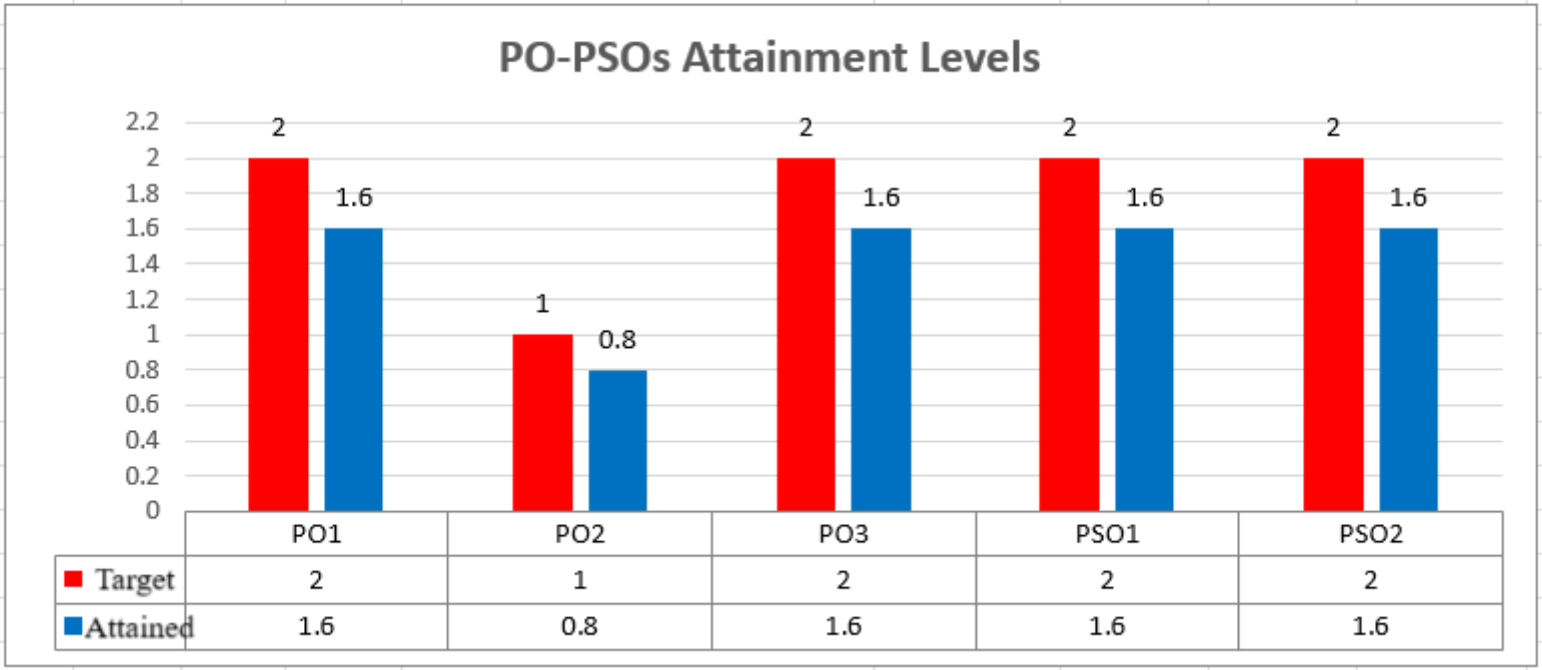
Cumulative CO Attainment Calculation

CESP M.TECH. I SEMESTER 2021-2023 P20SP101-ADVANCED COMMUNICATION THEORY					
Cumulative CO Attainment Calculation A.Y.2021-22					
		CO1	CO2	CO3	CO4
1	MINOR-1	0			
2	MID SEMESTER EXAMINATION-1	1	1		
3	MINOR-2			3	
4	MID SEMESTER EXAMINATION-2			3	3
5	ASSIGNMENT-1	3	3		
6	ASSIGNMENT-2			3	3
7	CP	1	1		
8	CRP			3	3
9	Average CIE CO	1.25	1.666667	3	3
10	CIE CO	1	1	3	3
11	ESE CO	3	3	3	3
12	Total CO = 60% of CIE + 40% of ESE	1.8	1.8	3	3

Final CO attainment for the Course =2.4

PO Attainment Calculation

M.Tech (CESP) – Advanced Communication Systems PO-PSO Attainment Levels										
Target levels (2021-23)					Attainment level based on marks secured by students. (40%ESE + 60%CIE)	Attainment levels				
PO1	PO2	PO3	PSO1	PSO2		PO1	PO2	PO3	PSO1	PSO2
2	1	2	2	2	2.4	1.6	0.8	1.6	1.6	1.6



PO attained value = PO target x (CO cumulative/3)

Method of measuring attainment

Direct attainment (DA) = ((CIE * 0.60) + (ESE * 0.40)

Indirect attainment (IA) = (ESF * 0.25) + (AF * 0.25) + (EF * 0.25) + (PF * 0.25)

Total attainment(TA) = (0.80 * DA) + (0.20 * IA)

ESF – Graduate Exit student Feedback
AF – Alumni Feedback
EF – Employer Feedback
PF – Parent Feedback

Indirect attainment (IA) = (ESF * 0.25) + (AF * 0.25) + (EF * 0.25) + (PF * 0.25)

INDIRECT ATTAINMENT

Attainment of Course Outcomes

Attainment POs and PSOs (Batches of 2022-24, 2021-23 & 2020-22)

Direct and Indirect Assessment for the 2022-24 Batch

	POs / Year	Attainment Levels				
		PO1	PO2	PO3	PSO1	PSO2
Course Attainment levels (Target level)	2022-24	1.80	1.60	1.63	1.57	1.46
DIRECT ASSESSMENT (80% of average PO)		1.31	1.17	1.20	1.13	1.05
INDIRECT ASSESSMENT (20 % of average PO)		0.34	0.28	0.31	0.28	0.28
TOTAL ASSESSMENT (100 % of average PO)		1.65	1.45	1.51	1.41	1.33

Direct and Indirect Assessment for the 2021-23 Batch

	POs / Year	Attainment Levels				
		PO1	PO2	PO3	PSO1	PSO2
Course Attainment levels (Target level)	2021-23	1.85	1.60	1.63	1.54	1.46
DIRECT ASSESSMENT (80% of average PO)		1.18	1.05	1.06	1.02	1
INDIRECT ASSESSMENT (20 % of average PO)		0.34	0.29	0.30	0.29	0.28
TOTAL ASSESSMENT (100 % of average PO)		1.52	1.34	1.36	1.31	1.28

Attainment of Course Outcomes

Attainment POs and PSOs (Batches of 2022-24, 2021-23 & 2020-22)

Direct and Indirect Assessment for the 2020-22 Batch

	POs / Year	Attainment Levels				
		PO1	PO2	PO3	PSO1	PSO2
Course Attainment levels (Target level)	2022-24	1.85	1.60	1.63	1.54	1.46
DIRECT ASSESSMENT (80% of average PO)		1.15	1.06	1.05	0.98	0.95
INDIRECT ASSESSMENT (20 % of average PO)		0.34	0.28	0.31	0.28	0.26
TOTAL ASSESSMENT (100 % of average PO)		1.49	1.34	1.36	1.26	1.21

M. Tech (Communication Engineering & Signal Processing)					
	PO1	PO2	PO3	PSO1	PSO2
PO Target	1.85	1.60	1.63	1.54	1.46
M.Tech 2020-22 Batch Attainment Levels	1.49	1.34	1.36	1.26	1.21
M.Tech 2021-23 Batch Attainment Levels	1.52	1.34	1.36	1.31	1.28
M.Tech 2022-24 Batch Attainment Levels	1.65	1.45	1.51	1.41	1.33

Criterion-3:
Students' Performance

Items	CAY (2024-25)	CAY*m*1 (2023-24)	CAY*m*2 (LYG) (2022-23)	CAYm3 (LYGm1) (2021-22)	CAYm4 (LYGm2) (2020-21)
Sanctioned intake of the program (*N*)	**12**	**12**	**12**	**12**	**30**
Total number of students admitted through GATE (*N*1)	-	-	-	-	-
Total number of students admitted through PG Entrance and others *(N2)*	07	01	03	05	08
Total number of students admitted in the Program (*N*1 + *N*2)	**07**	**01**	**03**	**05**	**08**

Number of students who have successfully graduated

Year of entry	*N*1 + *N*2 (As defined above)	Number of students who have successfully graduated	
		I Year	II Year
CAY (2024-25)	07	-	-
CAY*m*1 (2023-24)	01	01	03
CAY*m*2 (LYG) (2022-23)	03	03	04
CAY*m3* (LYG*m*1) (2021-22)	05	04	05
CAYm4 (LYG*m2*) (2020-21)	08	05	-

Success Rate in the stipulated period of the program

Item	LYG (2023-24)	LYG m1 (2022-23)	LYGm2 (2021-22)
X =Number of students admitted in first year of same batch	03	05	08
Y =Number of students completing program in stipulated duration	03	04	05
Success Index [SI = Y / X]	**01**	**0.8**	**0.625**
Average			**0.8083**

Placement, Higher Studies and Entrepreneurship

Item	CAYm1 (2023-24)	CAYm2 (2022-23)	CAY*m3* (2021-22)
Number of students admitted in first year of same batch(N)	03	05	08
No. of students placed in companies or Government Sector (x)	01	03	06
No. of students pursuing Ph.D. / JRF/ SRF(y)	-	-	-
No. of students turned entrepreneur in engineering/technology (z)	-	01	-
x + y + z =	01	04	06
Placement Index : (x + y + z)/N	0.33	0.8	0.75
Average placement= (P1 + P2 + P3)/3	0.626		
Assessment Points = 20 × average placement	**12.53**		

Professional Activities (15)

DETAILS OF STUDENTS PARTICIPATION IN FDPS AND CONFERENCES

S.No.	Roll No.	Name of the Student	Name of the Event	Dates and Venue
1.	M21SP004	P.Krushak Kumar	FDP on "AI & ML in biometric Recognition"	August 16th – 25th – 2022, NIT Warangal
2.	M20SP004	Boda Srilekha	ICDECT Conference	August 27th – 28th -2021, KITS Warangal

DETAILS OF STUDENTS PARTICIPATION IN ISTE/IEEE ACTIVITIES

S.No	Name of the Event	Organized under ISTE/IEEE	Resource person/Faculty coordinator	Date(s)
ASSESSMENT YEAR		**CAY 2024-25**		
1	Workshop: SMART SENSOR PROTOTYPE	ISTE Kits Warangal	Sri. S. Pradeep Kumar Dr. B. Dhanalaxmi	18.10.24
2	Paper Presentations	ISTE Kits Warangal	Sri. E. Suresh, Dr.S.P.Girija,Smt. A. Vijaya, Dr.M.Raju, Dr.J.Tarun Kumar	19.10.24
3	Poster Presentations	ISTE Kits Warangal	Dr. K. Ramudu, Dr.S.Umamaheshwar, Mr. Syed Zaheeruddin, Mr. Abdul Muqueem	19.10.24
4	House of Mystery	ISTE Kits Warangal	Dr. M. Chandrasekhar, Sri.A.Pavan	19.10.24
5	Neon Logics	ISTE Kits Warangal	Dr. V. Raju, Smt. E. Susmitha	19.10.24
6	Tech & Tunes	ISTE Kits Warangal	Dr.K.Sowjanya, Sri. P. Yugander	19.10.24
7	Clue Quest	ISTE Kits Warangal	Dr. R. Srikanth, Sri.V. Shobhan	19.10.24
8	Puzzle Safari	ISTE Kits Warangal	Dr. D. Venu, Sri. D. Santhosh Kumar	19.10.24
9	Cyber Clash	ISTE Kits Warangal	Dr. A. Srinivas, Sri. P. Ramchander Rao	19.10.24
10	Circuit Hunt	ISTE Kits Warangal	Sri. P. Chiranjeevi, Dr. T. Sunil Kumar, Sri. Ch. Pavan Kumar	19.10.24
11	Innobyte	ISTE Kits Warangal	Dr. Ch. Sridevi, Sri.J.Sheshagiri babu	19.10.24

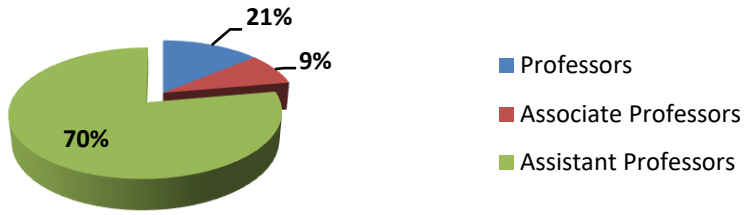
Student's Paper Publications(10)

S.No.	Student Roll No.	Student Name	Paper title	Publication details (like journal/conference name/vol/paper etc)
1.	M20SP001	K.Vamshi Krishna	Development of Novel Deep Recurrent Sparse NMF for Source Separation	Siva Priyanka S, Vamshi Krishna Krishnamaraju, "Development of Novel Deep Recurrent Sparse NMF for Source Separation", IJFANS International Journal of Food and Nutritional Sciences Volume 11, Issue 11 (2022)
2.	M20SP005	A.Srikanth Naik	Study on Approximate Multiplier with Low Power and High Accuracy Using Approximate High Order Compressors	A. Srikanth Naik, Dr. V. Raju, CH. Pavan kumar, "Study on Approximate Multiplier with Low Power and High Accuracy Using Approximate High Order Compressors," Journal of Engineering Sciences, Vol 14 Issue 04,2023

FACULTY INFORMATION

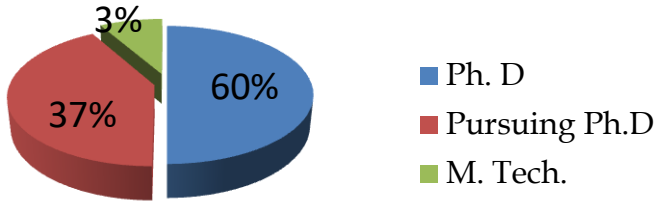
STRENGTH OF THE FACULTY 2024-25

Professors	03
Associate Professors	07
Assistant Professors	22
Total	**32**



QUALIFICATIONS OF THE FACULTY

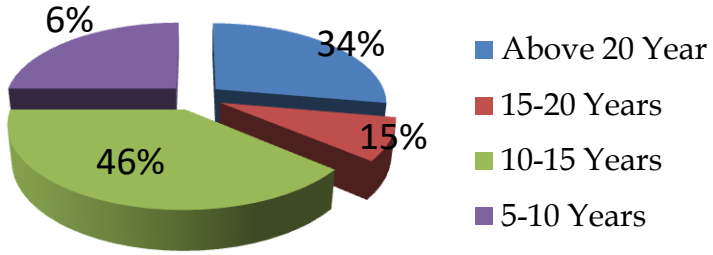
Ph. D	19
Pursuing Ph.D	12
M. Tech.	01
Faculty Guiding Ph. D	03
No of faculty recognized as research supervisors	08



FACULTY DEGREES

	UG	PG	Ph. D
IITs	0	0	01
NITs	01	01	02
State Universities	31	31	16
Total	**32**	**32**	**19**

Faculty Experience



Average Experience of the Faculty: 19 Years

List of Faculty Members

S. No.	Name of Faculty	Designation	Qualification	Specialization	Experience (Years)
1	Dr. K. Ashoka Reddy	Professor	Ph.D.	Signal Processing	30
2	Dr. G. Raghotham Reddy	Professor	Ph.D.	Image Processing	30
3	Dr. B. Ramadevi	Professor	Ph.D.	Wireless Communications	25
4	Dr.S.P. Girija	Assoc. Professor	Ph.D.	Image Processing	20
5	E. Suresh	Assoc. Professor	Ph.D.	Instrumentation and Control Systems	23
6	A. Vijaya	Assoc. Professor	Ph.D.	Design and Implementation of Antennas	26
7	Dr. M. Raju	Assoc. Professor	Ph.D.	Wireless Communications	25
8	Dr.V. Venkateshwar Reddy	Assoc. Prof. & Head	Ph.D.	Microwave Communications	14
9	Dr.Umamaheshwar Soma	Assoc. Professor	Ph.D.	Wireless Communications	31
10	Dr.J.Tarun Kumar	Asst. Professor	Ph.D.	Wireless Communications	27
11	B. Komuraiah	Asst. Professor	M.Tech. (Ph.D)	Instrumentation and Control Systems	20
12	Dr. A. Srinivas	Asst. Professor	Ph.D.	Image Processing	18
13	Syed Zaheeruddin	Asst. Professor	M.Tech. (Ph.D)	Digital Systems and Computer Electronics	18
14	Dr.V. Raju	Asst. Professor	Ph. D.	VLSI	18
15	Dr.D. Venu	Asst. Professor	Ph.D.	Radar Signal Processing	20
16	Dr.R. Srikanth	Asst. Professor	Ph. D.	Image Processing	21
17	P. Chiranjeevi	Asst. Professor	M. Tech. (Ph. D)	VLSI System Design	17

List of Faculty Members

S. No.	Name of Faculty	Designation	Qualification	Specialization	Experience (Years)
18	S. Pradeep Kumar	Asst. Professor	M. Tech. (Ph.D.)	Electronics Communications	17
19	Dr. J. SheshagiriBabu	Asst. Professor	Ph.D.	Signal Processing	16
20	A.Pavan	Asst. Professor	M.Tech.	Embedded Systems	11
21	Dr. M. Chandrasekhar	Asst. Professor	Ph.D.	Microwave Communications	18
22	Dr. B. Dhanalaxmi	Asst. Professor	Ph.D.	Image Processing	18
23	Dr.K.Sowjanya	Asst. Professor	Ph.D.	Image Processing	19
24	Dr.Sridevi Chitti	Asst. Professor	Ph. D.	VLSI	18
25	Dr.Tumma Sunil Kumar	Asst. Professor	Ph.D.	VLSI	08
26	P.Yugander	Asst. Professor	M. Tech. (Ph. D)	Digital Communications	15
27	D. Santhosh Kumar	Asst. Professor	M. Tech. (Ph.D)	VLSI & ES	19
28	P. Ramchandar Rao	Asst. Professor	M. Tech. (Ph. D)	VLSI & ES	13
29	E.Susmitha	Asst. Professor	M. Tech. (Ph. D)	Computer & Communications	15
30	Ch. Pavan Kumar	Asst. Professor	M. Tech. (Ph. D)	VLSI & ES	12
31	Dr. Md Abdul Muqueem	Asst. Professor	Ph.D	VLSI & ES	17
32	V. Shobhan Reddy	Asst. Professor	M. Tech. (Ph. D)	Digital Electronics and Communication Engineering	08

Student-Faculty Ratio (SFR)

Year	Intake (UG+PG)	No. of Students (N)	No. of Faculty (F)	SFR=N/F
CAY (2024-25)	198+12	618	30	20.6
CAYm1 (2023-24)	198+12	618	33	18.72
CAYm2 (2022-23)	198+12	618	35	17.65
Average SFR for three assessment years				18.99

Consistently maintained SFR less than 19 with good faculty retention

Faculty Achievements

Item	AY:2024-25	AY:2023-24	AY: 2022-23	AY: 2021-22	Total
Journals Papers-International	06	32	18	19	75
UGC Recognized Journals	-	-	05	08	13
Conference Proceeding – International	02	24	30	36	92
Books Authored and Book Chapters	0	11	09	07	27
Patents Filed / Published	01	03	03	05	12
Research & Consultancy Projects	0	02	01	01	04
FDPs/STTPs Organized	0	01	02	06	09
FDPs/STTPs Attended	8	21	38	71	130
Total	17	94	106	153	362
Citations	438	495	669	601	2203

Faculty who acquired PhD during the last four years

S. No	Academic Year in Ph. D Awarded	Name of the Faculty	University
1	Dr. A.Srinivas	JNTU, Kakinada	**Sept, 2024**
2	Dr. J. Sheshagiri Babu	JNTU, Hyderabad	**Dec, 2024**
3	Dr. Md. Abdul Muqueem	Lovely Professional University, Punjab	**Nov, 2024**
4	Dr. S.P.Girija	OU, Hyderabad	**2023**
5	Dr. R.Srikanth	KU, Warangal	**2022**
6	Dr. D.Venu	OU, Hyderabad	**2022**
7	Dr. .Siva Priyanka	NIT, Warangal	**2022**
8	Dr. T.Sunil Kumar	NIT, Warangal	**2022**
9	Dr. V. Raju	VIT Vellore	**2021**

Faculty members pursuing Ph. D degree

S.No	Name of the Faculty	Name of University	Name of the Guide(s)	Date of Admission	Title
1.	Sri E. Suresh, Assoc. Professor	Kakatiya University	Dr.K.Punnam Chander	29-08-2023	Effective Prediction of soft-Tissue Sarcomas using Artificial Intelligence and Optimization Techniques
2.	Smt. A. Vijaya, Assoc. Professor	Osmania University	Prof N.Bhandari& Prof VSSN Srinivasa Baba	2018	Microwave Antennas-Slot coupled waveguide junctions and substrate integrated waveguide design
3.	Sri B. Komuraiah, Asst. Professor	Andhra University	Prof.M.Satya Anuradha	07-04-2018	microstrip patch antenna design and development
4.	Mr. Syed Zaheeruddin, Asst. Professor	VIT University	Dr. K. Suganthi	19-12-2018	Classification and Segmentation of images before and after enhancement
5.	Sri P.Chiranjeevi, Asst. Professor	NIT Warangal	Prof. N. Bheema Rao	23-12-2021	Performance Analysis of on chip Inductor
6.	Sri S. Pradeep Kumar, Asst. Professor	JNTU Hyderabad	Prof. K. Anitha Sheela	23-10-2018	Speech Processing
7.	Sri P. Yugander, Asst. Professor	VIT Chennai	Dr. M. Jagannath		Biomedical image segmentation
8.	Smt. E. Susmitha, Asst. Professor	Mohan Babu University	Dr.M. Dharani	19-01-2024	Device to device Communications
9.	Sri Ch. Pavan Kumar, Asst. Professor	Kakatiya University	Dr K. Sivani (Thesis Submitted)	17-11-2012	Ultra Low power design in subthreshold region
10.	Sri. V. Shobhan Reddy, Asst. Professor	Satyabhama University	Dr.R.Ramadevi	12-06-2019	Development of deep learning strategies based on CNN for performance improvement in real time object identification
11.	Sri D. Santhosh Kumar, Asst. Professor	IIIT UNA	Dr. V. Kishore	22-02-2024	Wireless Communications
12.	Sri P. Ram Chander, Asst. Professor	NIT AP	Dr. Yuvaraj	22-12-2021	Antennas with IOT

Faculty recognized as research supervisors

The list of faculty members are recognized as Research Supervisors to carry out the research programs leading to award of Ph.D degree in Electronics and Communication Engineering by the University, vide order No. 651/B3/KU/2024, dt. 23-05-2024.

1. **Dr. K. Ashoka Reddy, Professor, recognized by NITW, JNTUH, KU**
2. **Dr. G. Raghotham Reddy, Professor, recognized by - KU**
3. **Dr. B. Rama Devi , Professor, recognized by – KU**
4. **Dr. M. Raju, Associate Professor, recognized by – Annamalai univeristy and NIT Meghalaya**
5. **Dr. V. Venkateshwar Reddy, Associate Professor, recognized by – KU**
6. **Dr. M. Chandrashekar, Assistant Professor, recognized by – KU**
7. **Dr. B. Dhanalaxmi, Assistant Professor, recognized by – KU**
8. **Dr. T. Sunil Kumar, Assistant Professor, recognized by NIT Warangal**

Faculty Development work (FDPs) Organized

CAYm1: 2023-24

S. No.	Name of the FDP	Organized by	Chief Guest/ Resource Person	Duration
1	A two weeks FDP on "Microcontroller, Embedded Systems & Computer Networks Products"	Department of ECE, KITS Warangal	Dr. M. Ramakrishnan, Associate Professor, SRM, A.P.	18th June to 1st July 2024

CAYm2: 2022-23

S. No.	Name of the FDP	Organized by	Chief Guest/ Resource Person	Duration
1	A two weeks FDP on "AI & Machine Learning for Biomedical signal and Image Analysis"	Department of ECE, KITS Warangal	Prof. T. Kishore Kumar Professor, NITW	27th June- 06th July 2022
2	PCB Design and Fabrication	KITS Warangal	Dr. M. Chandra Shekar	6 days & December 19 - 24,2022

CAYm3: 2021-22

S.No.	Name of the FDP	Organized by	Chief Guest/Resource Person	Duration
1	A one week FDP on "VLSI Design using Cadence Tools"	Department of ECE, KITS Warangal	P.Chiranjeevi	16-05-2022 to 20-05-2022
2	FDP on Embedded Systems Industrial Application	Department of ECE, KITS Warangal	Shaik Zubair Ahmed	07-09-2021

Faculty Development work (Conferences Organized)

CAYm1: 2023-24

S. No.	Name of the Conference	Organized by	Editors	Organized dates	Conference proceedings
1	5thInternational Conference on **"Computer & Communication Technologies (IC3T) 2023**	Department of Electronics and Communication Engineering, KITS Warangal.	Dr. B. Rama Devi, Dr. T. Kishore Kumar Dr. M. Raju Dr.K. Srujan Raju, Dr. MathiniSellathurai	October, 6th & 7th 2023	Proceedings of 5thInternational Conference on **"Computer & Communication Technologies (IC3T) 2023**

CAYm2: 2022-23

S. No.	Name of the Conference	Organized by	Editors	Organized dates	Conference proceedings
1	4thInternational Conference on **"Computer & Communication Technologies (IC3T) 2022**	Department of Electronics and Communication Engineering, KITS Warangal.	Dr. K. Ashoka Reddy, Dr. B. Rama Devi, Boby George, K. Srujan Raju, MathiniSellathurai	July, 29th & 30th 2022	Proceedings of 4thInternational Conference on **"Computer & Communication Technologies (IC3T) 2022**

CAYm3: 2021-22

S. No.	Name of the Conference	Organized by	Editors	Organized dates	Conference proceedings
1	5th International Conference on **"Data Engineering and Communication Technology (ICDECT-2021)**	Department of Electronics and Communication Engineering, KITS Warangal.	Dr. K. Ashoka Reddy, Dr. B. Rama Devi, Boby George, K. Srujan Raju,	August 27-28, 2021	Proceedings of 5th International Conference on **"Data Engineering and Communication Technology (ICDECT-2021)**

Seminars/Workshops conducted in the Department

CAYm1: 2023-24

S.no	Name of the Seminar/Workshop	Chief Guest/Resource Person	Duration
1.	Youth Unite-Arise Aspire Achieve	Santhi .Swaroop	1 hour 25th Jan 2024
2.	Advanced in Home Intelligence :Android Integration and Futuristic Automation Technologies	AbhinavMunigala Core member in Open Hardware team Working in Helico as R&D	Feb2-3rd 2024

CAYm2: 2022-23

S.no	Name of the Seminar/Workshop	Chief Guest/Resource Person	Duration
1.	**A Code Arudino** (Arudino boards)	Dr J Tarun Kumar	05/11/22
2.	4-day Workshop on **"Introduction to Programming with MATLAB"**	Dr R.Srikanth Dr K.Sowjanya and Dr B.Dhanalaxmi	28.01.2023 to 20.02.2023
3.	"IOT Based Continuous Monitoring System Using Cloud Services"	B.Praneeth&B.Pradeep Commons collective Hyderabad	18 Nov 2022
4.	PCB Design and Fabrication	Dr.V.Raju&Dr.T.Sunil Kumar	19.12.22 to 24.12.22

CAYm3: 2021-22

S.no	Name of the Seminar/Workshop	Chief Guest/Resource Person	Duration
1.	MATLAB for Beginners	Dr.D.Venu	01 (13.12.2021)
2.	Workshop On Basics of MATLAB forCourse Projects	Dr.R.Srikanth	September 01,2021
3.	WorkshoponApplicationofAutomationin Industry	Dr. G. Sanath Kumar, Deputy director, MSME, Hyd	1day&14-09-2021
4.	A Two Day FDP on "Hands on Workshop with DSP (TMS320c6748)"	Starcom, A Visual Data Analytics Company	17th& 18th September 2021
5.	One day Online Workshop on"MATLAB for Beginners" in association with ISTE by SriD.Venu, Assistant Professor, ECE, KITSW	Dr.K.Sowjanya	13thDecember2021
6.	Handson Machinelearning, A fourday workshop with 50± participation of the students	Panduranga RaviTeja	4 days14thto17thOctober2021

No. of Guest / Expert lectures arranged in the department

CAY: 2024-25

S No	Industry Expert / Guest Speaker Name & Designation	Details of Industry / Organization by	Topic/Title	Date(s)
1.	Sri G. Krishna Chaitanya Manager, Salesforce Pvt. Ltd.	Department of ECE, KITS Warangal	Critical Thinking and Problem Solving	05th October 2024
2.	Sri Kalyan Sagar, PMC Engineer, Saudi Aramco Pvt. Ltd.	Department of ECE, KITS Warangal	Design and Development Excellence	26th October 2024
3.	Dr. Naveen Gupta, Asst. Prof., Dept. of EEE, BITS Pilani	Department of ECE, KITS Warangal	Research and Innovation Techniques	16th November 2024
4.	Sri. N Venkata Reddy Founder & CEO, Tecky Pvt. Ltd	Department of ECE, KITS Warangal	Tools Proficiency and Modern Technologies	30th November 2024
5.	Sri. Chetan Sharma, Director, Software Development, Oracle	Department of ECE, KITS Warangal	Designing Tomorrow: An insightful exploration of industry-aligned problem Analysis, Solutions, and Tools	1st March, 2025

MoUs/ MoAs with industry partners (during assessment Period)

S.No.	Name of Industry
1.	**Electronics Sector Skills Council of India(ESSCI)**" having its registered office at 422, Okhla Industrial Estate, Phase-III, New Delhi- 110 020
2.	**Efftronics Systems Pvt. Ltd**.," whose registered office at 40-15-9, Brudhavan Colony, Vijayawada, 520010, Andhra Pradesh, India.
3.	**Transfinite Innovative Solutions Pvt Ltd. (A member of the Apollo innovative group)"** whose registered office at 302, India Printing House, Wadala west, Mumbai-400 031, India.
4.	**Pentagon Rugged Systems(India) Pvt Ltd**" whose registered office is at 502, SAFA Apartment, Redhills, Hyderabad, Telangana, 500 004.
5.	**Research and Innovation Circle of Hyderabad (RICH)**" whose registered office is at 1st floor, Parisrama Bhavan, Fateh Maidan Road, Basheerbagh, Hyderabad, Telangana-500 004 and working office at T-Hub, 3rd floor, IIIT, Gachibowli, Hyderabad.
6.	**Brainiac Cognitive Solutions**" whose registered office is Dr. Tilak Bungalow,10, RAM Mandir Road, Vile Parle (East), Mumbai-400057 (on 17.07.2019).
7.	**Echohealth Products Pvt Ltd**" whose registered office at No. 1837, 20th main road, Annanagar (West), Chennai-600004, India.
8.	**Kwality Group of Industries, Which Includes Kwality Electronics Industries And Kwality Photonics Pvt Ltd**," whose registered office at Plot No. 29, electronic Complex, Kushaiguda, Hyderabad-500 062.
9.	**Telangana Information Technology Association (TITA)"** whose registered office at 407, 4th floor, Karan center, Parklane Circle, Secundrabad-500003, Telangana, India.
10.	**Blackbuck Engineering Pvt Ltd**.," whose registered office at 5-124/1, Chanda Nagar, Hyderabad, working office at Gachibowli, Hyderabad, Telangana.

FACILITIES AND TECHNICAL SUPPORT

- **Infrastructure**
  - 13 Laboratories (Exclusively 2 labs for PG)
  - Research center
  - Departmental library
  - 14 Staff Rooms equipped with Internet Facility
  - 11 Class Rooms exclusive for the Department

- **Technical & Supporting Staff**

  Technical Staff: 07

  Office Staff : 02

List of Laboratories & Equipment Cost

DEPARTMENT OF ELECTROICS AND COMMUNICATION ENGINEERING Laboratory Equipment Cost		
S.No	**Name of the laboratory**	**EQUIPMENT COST IN RS.**
1.	PULSE AND DIGITAL CIRCUITS LABORATORY	11,19,009.00
	PDC LAB MODROB	6,74,073.84
2.	DIGITAL SIGNAL PROCESSING LABORATORY	25,81,357.00
3.	MICROPROCESSOR SYSTEM DEVELOPMENT LABORATORY	20,35,233.00
4.	INTEGRATED CIRCUITS LABORATORY	7,85,737.00
5.	MICROWAVE & OPTICAL COMMUNICATION LABORATORY	11,66,681.00
6.	ELECTRONICS CIRCUITS LABORATORY	5,39,906.00
7.	COMMUNICATION SYSTEMS LAB	20,78,731.00
8.	EMBEDDED SYSTEMS & ARM PROCESSORS AND APPLICATIONS LABORATORY	31,53,219.00
9.	INTERNET OF THINGS LABORATORY	3,75,000.00
10.	PROJECT WORK LABORATORY	2,93,698.00
11.	DIGITAL COMMUNICATION LAB (COMMUNICATION ENGINEERING & SIGNAL PROCESSING LAB)	14,73,166.00
12.	ADSP & AIML LABORATORY (COMMUNICATION ENGINEERING & SIGNAL PROCESSING LAB)	23,04,810.00
13.	SOFTWARE DEFINED RADIO LABORATORY (COMMUNICATION ENGINEERING & SIGNAL PROCESSING LAB)	7,31,600.00
Total		**1,93,12,220.84**

List of laboratories in area of Program specialization (M.Tech - CESP)

S.No	NAME OF THE LABORATORY	EQUIPMENT COST IN RS.
1.	DIGITAL COMMUNICATION LAB	**14,73,166.00**
2.	ADSP & AIML LABORATORY	**23,04,810.00**
3.	SOFTWARE DEFINED RADIO LABORATORY	**7,31,600.00**
	Total Cost in Rs.	**45,09,576.00**

Major Equipment in laboratories in area of Program specialization

DIGITAL COMMUNICATION LABORATORY

S No	Name of Equipment/ Kit	Qty	Cost in Rs.
1	Mobile Phone Trainer Kit	01	36,187.00
2	CDMA Trainer Kit	01	1,12,762.00
3	GPS Trainer Kit	01	31,150.00
4	Colour Digital Storage Oscilloscope with FFT	01	13,600.00
5	Switchable Probe-60MHz	05	4,238.00
6	32 Channel Logic Analyzer	01	55,088.00
7	Lenovo Intel G630 Dual Core	05	95,000.00
8	Cathode Ray Oscilloscope-30MHz	02	36,000.00
9	10KVA/192VDC Online UPS	01	71,400.00
10	12V-26AH-Amaraja Quanta SMF Batteries	16	33,600.00
11	Dell Desktop Intel(R)core(TM) i5 Processor 8400 CPU@2.4GHz 8th Generation with 8GB RAM PC'S	20	8,07,120.00
12	Dell Power Edge(R)T30 Intel(R)Xeon(R) Server with 16GB RAM,1TB HDD	01	80,345.00
13	My Passport 1TB Blue PPT Slider (Logitech)	01	3,800.00
14	Vestar 2.0 Ton 3Star rated Split type Air Conditioner	02	76,800.00
15	Ahuja Portable PA System	01	6,078.00
16.	Wireless Voice Amplifier Speaker	02	9,998.00
	Total Amount in Rs.		**14,73,166.00**

Major Equipment in laboratories in area of Program specialization

ADSP&AIML LABORATORY

s.no	Name of the Equipment	Quantity	Cost in Rs
1	DELL DESKTOPS (8GB RAM,1TB HDD)	35	17,46,000.00
2	TMS320C6748 LCDK with XDS100 Emulator	05	1,71,100.00
3	CCD CMOS CAMERA (NTSC/PAL) Compatible	05	23,600.00
4	DSP EVM BoardAM5728Multicore Processor Board&Camera Module for AM5728 Board	02	2,05,320.00
5	N-DELTA 10 KVA UPS	01	1,58,790.00
	Total Amount in Rs		**23,04,810.00**

Major Equipment in laboratories in area of Program specialization

SOFTWARE DEFINED RADIO LABORATORY

S. No.	Equipment/Item	Qty	Cost per unit in Rs.	Cost of Equipment in Rs.
1	NI USRP 2901 Bundle with Cable accessories	01	4,40,000	4,40,000.00
2.	Vert400 Vertical Antenna (144MHz, 1200 MHz)-Tri band antenna	08	10,500.00	84,000.00
3.	Vert900 Vertical Antenna (824-960 MHz, 1710-1990MHz)-Dual band antenna	08	6,000.00	48,000.00
4.	Vert2450 Vertical Antenna (2.4-2.5 and 4.9-5.9GHz) Dual band Antenna	08	6,000.00	48,000.00
			Total Rs.	**6,20,000.00**
			SGST @ 9%	**55,800.00**
			CGST @ 9%	**55,800.00**
			Grand Total in Rs.	**7,31,600.00**

Estd - 1980

DETAILS OF CLASS ROOMS WITH COVERED AREA

S. No.	Room No.	Floor	Area in Sq. Ft.
1	BVI-101	First	716.87
2	BVI-102	First	716.87
3	BVI-103	First	715.8
4	BVI-201	Second	712.57
5	BVI-202	Second	737.32
6	BVI-203	Second	742.71
7	BVI-204	Second	715.8
8	BVI-207(PG)	Second	715.8
9	BIV-320	Third	712.57
10	BIV-321	Third	715.8
11	BIV-323	Third	715.8

Research facilities / center of excellence

S.No.	Name of the Facility	Specialized Equipment Name	Equipment details	Utilization details from the perspective of PO attainment
1.	Research lab	Vlsi Design Suite A Bundle Of 5 Users	Vlsi Design Suite A Bundle Of 5 Users	**P20SP207:** Mini project with Seminar – II Sem **P20SP303:** Dissertation Phase – I – III Sem **P20SP401:** Dissertation Phase – II – IV Sem (PO1, PO2, PO3, PSO1 & PSO2)
		Fpga Based Vlsi Training Unit	Fpga Based Vlsi Training Unit	
		Xilinx Vivado Design Suite	Xilinx Vivado Design Suite	
		Orcad University Simulation Bundle	Orcad University Simulation Bundle	
		Tms 6711 Based Dsp Starter Kits(Texas)	Tms 6711 Based Dsp Starter Kits(Texas)	
		Matlab Campus Wide License - 2024	Matlab Campus Wide License -2024	
		Antenna fabrication Machine (MITS Eleven Lab Antenna/PCB Serial no:LAB18490)	Antenna fabrication Machine (MITS Eleven Lab Antenna/PCB Serial no:LAB18490)	
		Vector network analyzer (N9915A and KEYSIGHT Technology)	Vector network analyzer (N9915A and KEYSIGHT Technology)	
		Advanced Design System (EM simulation Software) (E9000T and ADS standard university license)	Advanced Design System (EM simulation Software) (E9000T and ADS standard university license)	
		HFSS EM Simulator	HFSS EM Simulator	

Research Facilities / Center of Excellence

S.No.	Name of the Facility	Specialized Equipment Name	Equipment details	Utilization details from the perspective of PO attainment
2	**Cadence Standard Bundle**	Cadence Standard Bundle Analog & Digital FE&BE	✓ 20 User license	PO1, PO2,PO3, PSO1&PSO2
3	**Matlab Software** (Academic License)	Matlab Software	✓ Matlab Software	PO1, PO2,PO3, PSO1&PSO2
4	**Anaconda Navigator** (Open Sourse Software)	Jupyter Notebook	✓ Jupyter Notebook	PO1, PO2,PO3, PSO1&PSO2
5	**Center of excellence**	Transfinite iLAB	✓ SAP Client version 32 bit(Software)	PO1, PO2, PO3 PSO1&PSO2
6	**Center of excellence**	Blackbuck Engineers Pvt.Ltd	✓ Internships, Workshops ✓ Professional activities ✓ Webinars and industry focused activities	PO1, PO2, PO3 PSO1&PSO2
7	**Center of Excellence**	Technology Innovation and Incubation Center	Tiedup for ✓ Internships, Workshops ✓ Professional activities Webinars and industry focused activities	PO1, PO2, PO3 PSO1&PSO2
8	**Academic and Research Center**	MATLAB	✓ PCs ✓ MATLAB	PO1, PO2, PO3 PSO1&PSO2

Access to laboratory facilities, training in the use of equipment

S. No.	Name of the Laboratory	Event details	Date
1.	Software Defined Radio Laboratory	Two weeks FDP on "Microcontrollers, Embedded Systems, &Computer Network Products"	18.06.2024 to 01.07.2024
2.	Digital Communications Lab	Three Day Training programme on "Software Defined Radio"	21.07.2023 to 23.07.203
3.	Digital Communications Lab	One week FDP on "VLSI Design using Cadence Tools"	16.05.2022 to 20.05.2022
4.	Digital Communications Lab	Hands on Project Based approach for bio medical signal analysis using Matlab (Phase-1)	28.12.2020 to 10.01.2021
5.	Digital Communications Lab	Hands on Project Based approach for bio medical signal analysis using Matlab (Phase-2)	01.02.2021 to 13.02.2021
6.	Digital Communications Lab	Hands on Project Based approach for 5G Design and Development using Matlab (Phase-1)	02.11.2020 to 07.11.2020
7.	Digital Communications Lab	Hands on Project Based approach for 5G Design and Development using Matlab (Phase-2)	14.12.2020 to 19.12.2020
8.	Digital Communications Lab	Hands on Project Based approach for 5G Design and Development using Matlab (Phase-3)	18.01.2021 to 23.01.2021
9.	Transfinite iLab	Two weeks FDP on SAP Business One	22.07.2020 to 07.08.2020
10.	Digital Communications Lab	Three Day National Level Seminar on "Deep Learning for Engineering Applications"	06.01.2020 to 08.01.2020

5.3. Access to laboratory facilities, SDR training in the use of equipment

List of Non Teaching Staff

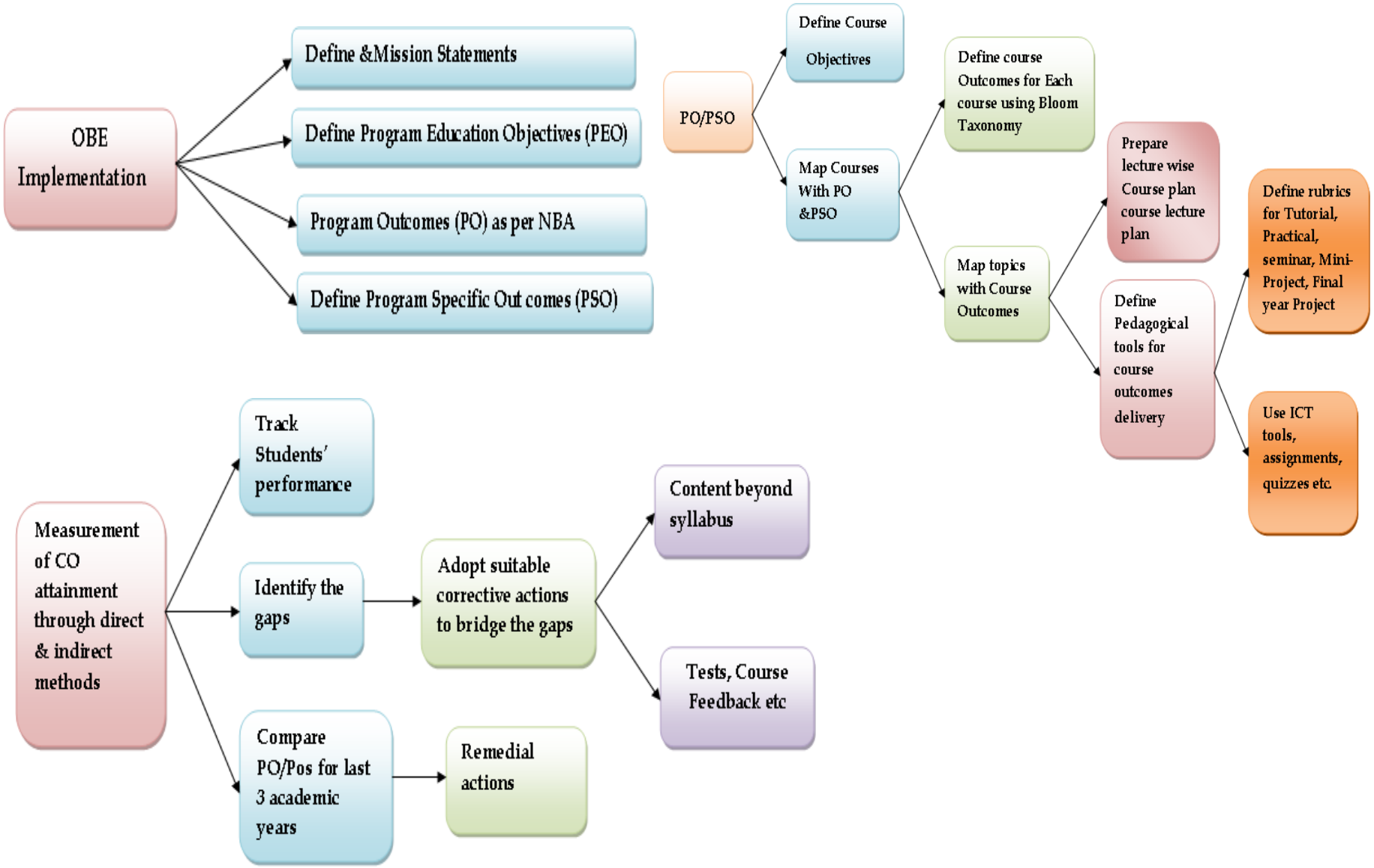
S. No.	Name of staff member	Designation	Qualification	Date of Joining	Experience (Years)
1	Sri. B. Narasimha Swamy	Sr. Instructor	I.T.I	14.01.1983	42
2	Smt. Y. Rekha	Lab Assistant	Diploma in ECE	14.08.2006	19
3	Sri. M. Prashanth	Lab Assistant	Diploma in ECE	15.12.2011	14
4	Sri Ch. Jagadish	Lab Assistant	B.Tech in ECE	21.12.2012	13
5	Smt K. Shailaja	Junior Assistant	MBA, PGDCA	27.07.2019	6
6	Sri B. Sreehari	Lab Assistant	Diploma in ECE	17.12.2018	07
7	Sri G. Vinay Kumar	Lab Assistant	B.Tech in ECE	17.12.2018	07
8	Sri. V. Shashank	Lab Assistant	B.Tech in EIE	01.03.2023	02
9	Sri Ch. Sammaiah	Attender	SSC	21.01.2019	06

Professional Development of Non-Teaching staff

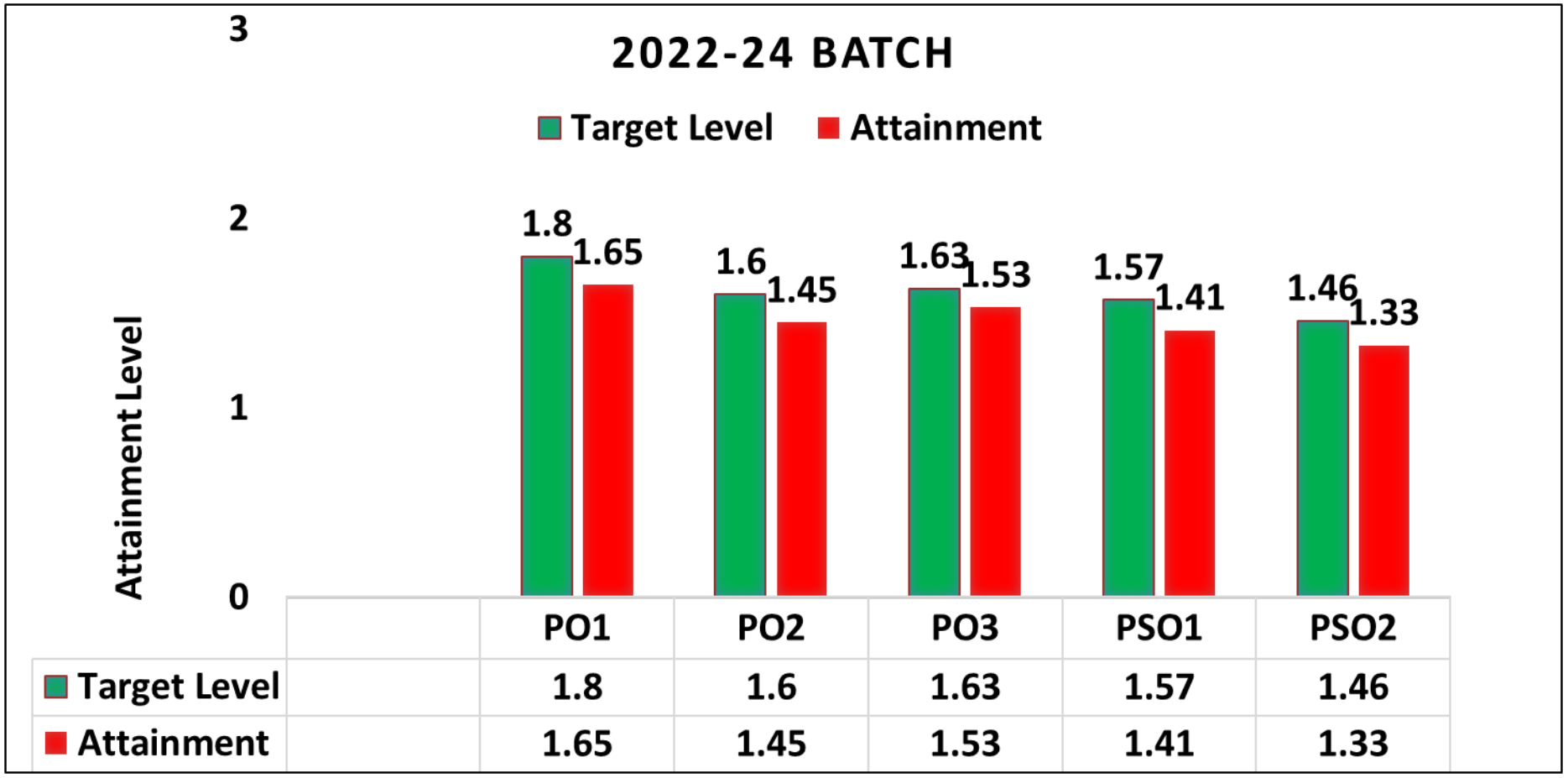
S.No.	Name of the Staff	No of Activities in 2024-25	No of Activities in 2023-24	No of Activities in 2022-23	No of Activities in 2021-22	No of Activities in 2020-21
1	Smt. Y. Rekha	01	01	01	-	
2	Sri. M. Prashanth	01	01		-	01
3	Sri Ch. Jagadish		01	01	-	
4	Smt K. Shailaja		01		-	
5	Sri B. Sreehari		01		-	
6	Sri G. Vinay Kumar		01		-	
7	Sri. V. Shashank		01		-	
Total Number of activities attended by nonteaching staff						12

CONTINUOUS IMPROVEMENT

OBE Philosophy

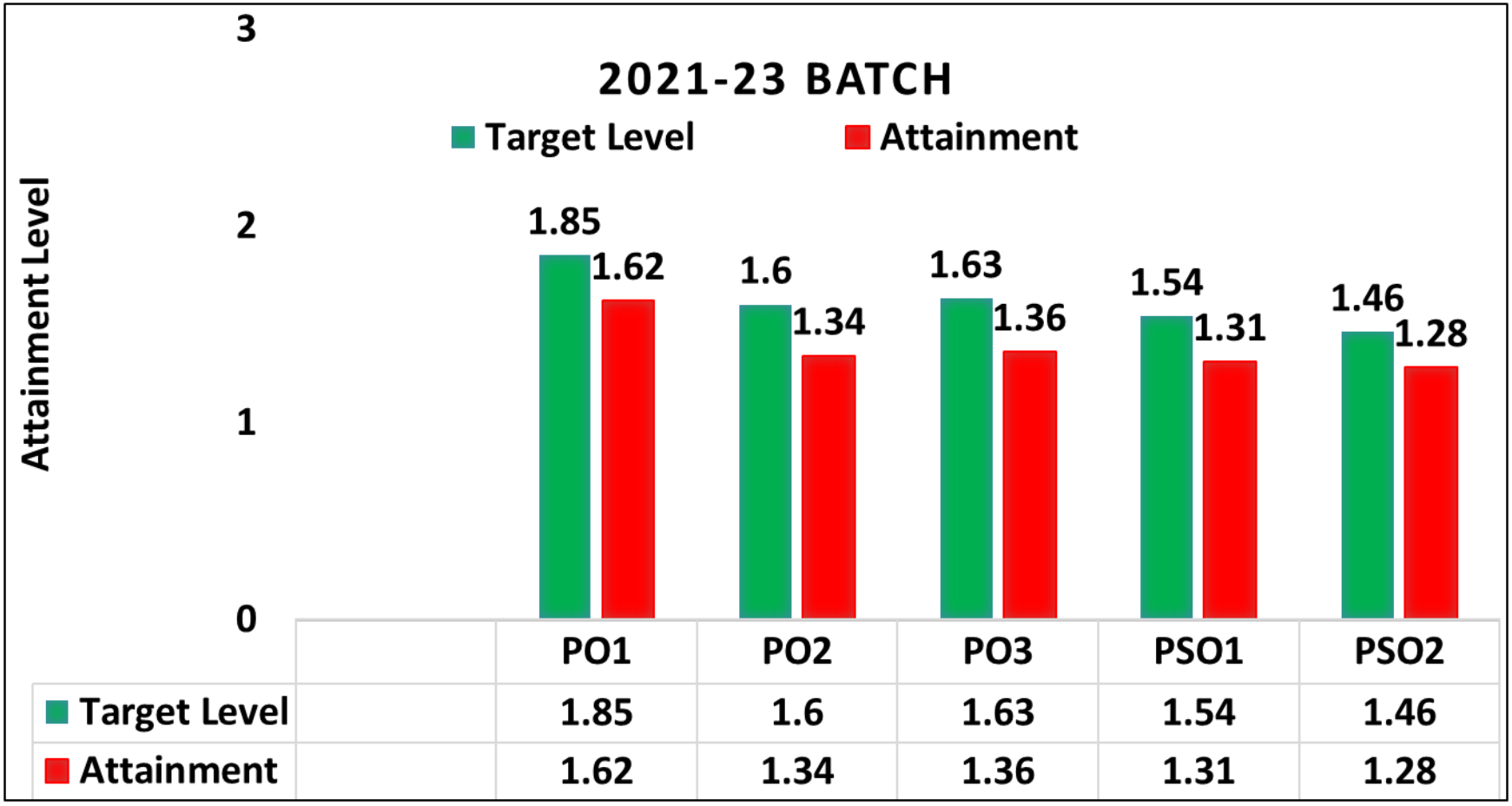


M. Tech.- CESP Program, Batch 2022-2024



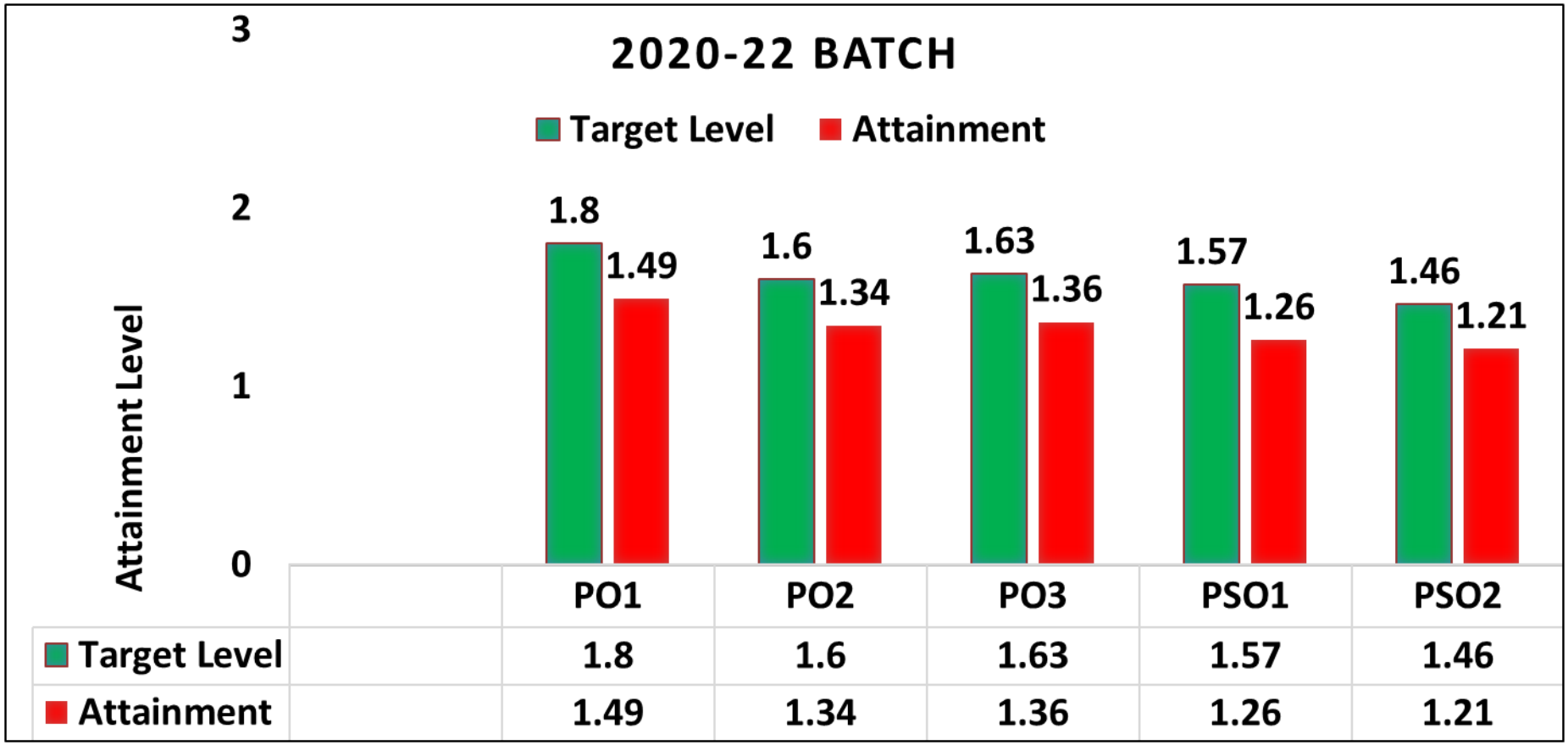
	PO1	PO2	PO3	PSO1	PSO2
Target Level	1.8	1.6	1.63	1.57	1.46
Attainment	1.65	1.45	1.53	1.41	1.33

M. Tech.- CESP Program, Batch 2021-2023



		PO1	PO2	PO3	PSO1	PSO2
Target Level		1.85	1.6	1.63	1.54	1.46
Attainment		1.62	1.34	1.36	1.31	1.28

M. Tech.- CESP Program, Batch 2020-2022



	PO1	PO2	PO3	PSO1	PSO2
Target Level	1.8	1.6	1.63	1.57	1.46
Attainment	1.49	1.34	1.36	1.26	1.21

Continuous Improvement in PO attainment

M. Tech (Communication Engineering & Signal Processing)					
	PO1	**PO2**	**PO3**	**PSO1**	**PSO2**
PO Target	**1.85**	**1.60**	**1.63**	**1.54**	**1.46**
M.Tech 2020-22 Batch Attainment Levels	1.49	1.34	1.36	1.26	1.21
M.Tech 2021-23 Batch Attainment Levels	1.52	1.34	1.36	1.31	1.28
M.Tech 2022-24 Batch Attainment Levels	1.65	1.45	1.51	1.41	1.33

Improvement in Quality of Paper Publications

A.Y.	SCI	Scopus	UGC	Conferences	Books And Book Chapters	Patents
2024-25	04	02	0	2	0	01
2023-24	13	19	0	24	11	03
2022-23	08	10	05	30	09	03
2021-22	11	08	08	36	07	05
Total	36	39	13	92	27	12

Improvement in Laboratories(Year wise newly added equipment)

A.Y.	SDR LAB		DC LAB		ADSP & AIML LAB		Total
	Name of the equipment with Specifications	Cost of equipment	Name of the equipmentwith Specifications	Cost of equipment	Name of the equipmentwith Specifications	Cost of equipment	
2024-25	Turnitin similarity and originality(HSN code 998439)	1,11,377.00	Mathworks campus wide suite software maintenance service Master licence 31448089	1,55,961.00	Nil	-	2,67,338.00
2023-24	Turnitin similarity and originality(Hsn code 998439)	1,15,408.00	Mathworks campus wide suite software maintenance service Master licence 31448089	1,26,497.00	Nil	-	2,41,905
2022-23	Ni usrp-2903 with cable accessories	4,40,000.00	Mathworks campus wide suite software maintenance service Master licence 31448089	1,65,427.00	Delta N-10kva Ups(10 KVA UPS)	1,56,000.00	10,26,427.00
	Vert400 vertical antenna (144mhz,400 GHz,1200 GHz (triband))	84,000.00			Daikin AC (inverter split ac unit)	85,000.00	
	Vert900 vertical antenna(824-960 GHz,1710-1990 GHz 0dual band)	48,000.00					
	Vert2450 vertical antenna(2.4-2.5 and 4.9-5.9 GHz dual band)	48,000.00					

Improvement in Laboratories(Year wise newly added equipment)

A.Y.	SDR LAB		DC LAB		ADSP & AIML LAB		Total
	Name of the equipment with Specifications	Cost of equipment	Name of the equipmentwith Specifications	Cost of equipment	Name of the equipmentwith Specifications	Cost of equipment	
2021-22	Nil	Nil	Mathworks campus wide suite software maintenance service Master licence 31448089	1,65,427.00	Tms320c6748lcdk with xds 100 emulator(Tms320c6748lcdk with xds 100 emulator)	1,45,000.00	26,60,087.00
			Cadence standard bundle analog and digital FE and BE	8,50,000.00	Ii)ccd cmos camera (ntsc/pal) compatible	20,000.00	
					Dell Desktop (intel core i5 -10400 10th gen - 8GB/1TB/keyboard/ mouse /19.5 led/2GB graphic	14,79,660.00	
						@18 GST	**755236.26**
						Total:	**49,50,993.26.**

BUDGET ALLOCATION FOR THE LAST FOUR YEARS

Total Budget in CFY:2024-25			Actual expenditure in CFY (31st March-2024)		
Non recurring	Recurring	Total	Non Recurring	Recurring	Total
46,26,300.00	8,92,900.00	55,19,200.00	20,44,800.00	3,68,772.00	24,13,572.00

Total Budget in CFY:2023-24			Actual expenditure in CFY (31st March-2023)		
Non recurring	Recurring	Total	Non Recurring	Recurring	Total
54,92,700.00	7,43,500.00	62,36,200.00	3,54,868.00	1,99,890.0	5,54,758.00

Total Budget in CFY:2022-23			Actual expenditure in CFY (31st March-2022)		
Non recurring	Recurring	Total	Non Recurring	Recurring	Total
62,61,500.00	8,12,500.00	70,74,000.00	25,64,820.60	91,589.00	26,56,409.00

Total Budget in CFY:2021-22			Actual expenditure in CFY (31st March-2021)		
Non recurring	Recurring	Total	Non Recurring	Recurring	Total
1,27,69,500.00	10,97,000.00	1,38,66,500.00	51,44,826.00	50,271.00	51,95,097.00

SWOC Analysis of the Department

Strengths:

- Recognized by KU as Research Center
- Qualified, experienced and dedicated teaching faculty with good retention ratio
- Regularly curriculum is revised with inputs from stakeholders to meet the requirements of industries
- Laboratories with state of the art equipment and modern software tools
- Department has been accredited with NBA regularly from 2008 to till date
- Strong mentoring/counselling of students through teachers
- Effective use of ICT in teaching learning process through e-class room facilities

Weakness:

- Lack of flexibility in introducing innovative and job/entrepreneurial development degree program
- Unable to produce good number of entrepreneurs
- Insufficient collaborative research
- Not enough highly meritorious students are opting for higher studies/Research

Opportunities:

- Department can strive to receive grants for research/ consulting project from bodies like UGC, AICTE, DST, DOE, etc.
- Exchange of knowledge with universities, central institutions, central/state organizations near by organization
- Industry tie-ups and joint research

Challenges:

- Due to the poor economic background of the locality, it is difficult to open self- financed job oriented courses
- Enhancing number of students opting for entrepreneurship
- Need to generate income from alternative sources
- More placements in core companies

Short Term and Long Term Goals

Short Term Goal	Action Plan
To make the students industry ready	✓ By providing in house training to students and updating them with latest technology by taking them on industrial tours ✓ Introducing more industry relevant courses
To produce more PhDs and publish more SCI papers	✓ As department is already recognized as a research center under KU, now we are able guide PhD students and enhance the paper publications count.
Long Term Goals	**Action Plan**
To see that all the faculty in the department are with doctorial degrees.	✓ To encourage faculty to publish and to attend National/International conferences.
Initiate more industrial tie ups for consultancy projects.	✓ To sign MOU's with industries of relevance.

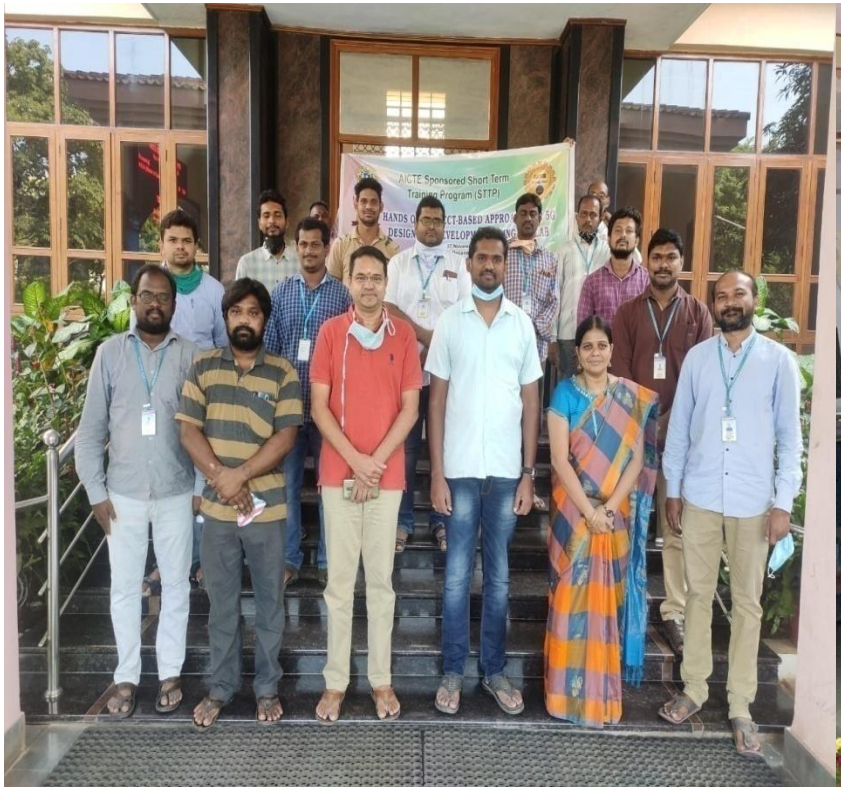
AICTE Sponsored Two week Faculty Development Program(FDP)

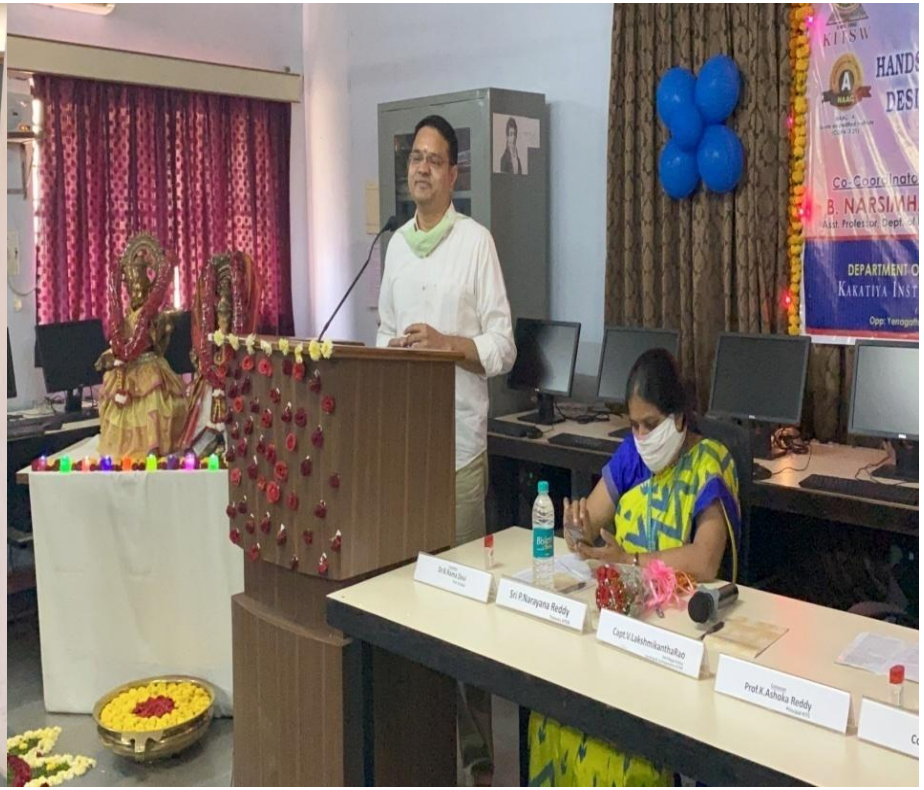
Release of brochure by Coordinator of FDP and Principal of KITSW (From Right to left) Prof.B.Ramadevi, HoD of ECE;

Prof.K.Ahoka Reddy Coordinator of FDP and Principal of the institute addressing the participants

"Hands on project based approach for biomedical signal analysis using MATLAB"

AICTE Sponsored one week Short Term Training Program





Release of brochure by Coordinator of STTP and Principal of KITSW (From Right to left) Prof.B.Ramadevi, HoD of ECE;

Prof.K.Ahoka Reddy Coordinator of STTP and Principal of the institute addressing the participants

"Hands on project based approach for 5G design and development using MATLAB"

International Conference on Data Engineering and Communication Technology (ICDECT) 2020

ICDECT'2020 inauguration by Prof.N.V.Ramana Rao , Director, NIT Warangal (From Left to right) Dr.K.Srujan Raju, Professor & Head, Dept. of CSE & IT, CMR Technical Campus; Prof.K.Ashoka Reddy, Principal,KITSW; Prof.B.Ramadevi, HoD of ECE & Sri E.Suresh, Associate Professor

Conference weblink: https://www.kitsw.ac.in/icdect2020/

Key Note Address- Dr. Milan Simic
Senior Lecturer, School of Engineering
RMIT University, Australia

Dr. Mathini Sellathurai, Professor, School of Engg. & Physical Sciences, Heriot-Watt University, UK




Thank You