PACE Institute of Technology&Sciences

SELF ASSESSMENT REPORT(TIER - I) FOR Electronics & Communication Engg.

Part A : Institutional Information

1 Name and Address of the Institution

PACE Institute of Technology&Sciences,
NH-5,Near valluramma temple ,valluru village tangutur mandal,prakasam district ,andhra pradesh,pin-523272

2 Name and Address of Affiliating University

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY KAKINADA

3 Year of establishment of the Institution:

2008

4 Type of the Institution:

○ Institute of National Infortance	◉ Autonomous
○ University	○ Any other(please specify)
○ Deemed University	

5 Ownership Status:

○ Central Government	☐ Trust
○ State Government	☑ Society
○ Government Aided	☐ Section 25 Company
○ Self financing	☐ Any Other(Please Specify)

6 Other Academic Institutions of the Trust/Society/Company etc., if any

Name of Institutions	Year of Establishment	Programs of Study	Location

7 Details of all the programs being offered by the Institution under consideration:

Name of Program	Program Applied level	Start of year	Year of AICTE approval	Initial Intake	Intake Increase	Current Intake	Accreditation status	From	To	Program for consideration	Program for Duration
ELECTRONICS AND COMMUNICATION ENGINEERING	UG	2008	2008	60	Yes	180	Granted accreditation for 3 years for the period (specify period)	2020	2023	Yes	4

Sanctioned Intake for Last Five Years for the ELECTRONICS AND COMMUNICATION ENGINEERING	
Academic Year	**Sanctioned Intake**
2022-23	180
2021-22	180
2020-21	180
2019-20	180
2018-19	180
2017-18	180

VLSI AND EMBEDDED SYSTEMS	PG	2013	2013	18	No	18	Eligible but not applied	--	--	No	2

8 Programs to be considered for Accreditation vide this application:

S No	Level	Discipline	Program
1	Under Graduate	Engineering & Technology	Civil Engg.
2	Under Graduate	Engineering & Technology	Computer Science & Engg.
3	Under Graduate	Engineering & Technology	Electronics & Communication Engg.
4	Under Graduate	Engineering & Technology	Mechanical Engg.
5	Under Graduate	Engineering & Technology	Electrical and Electronics Engineering

9 Total number of employees

A. Regular* Employees (Faculty and Staff):

Items	2022-23		2021-22		2020-21	
	MIN	MAX	MIN	MAX	MIN	MAX
Faculty in Engineering (Male)	210	223	208	215	206	226
Faculty in Engineering (Female)	76	83	76	82	63	67
Faculty in Maths, Science & Humanities teaching in engineering program (Male)	51	55	54	58	58	61
Faculty in Maths, Science & Humanities teaching in engineering program (Female)	27	30	24	26	20	22
Non-teaching staff (Male)	125	135	130	138	119	126
Non-teaching staff (Female)	55	63	40	50	24	27

B. Contractual* Employees (Faculty and Staff):

Items	2022-23		2021-22		2020-21	
	MIN	MAX	MIN	MAX	MIN	MAX
Faculty in Engineering (Male)	0	0	0	0	0	0
Faculty in Engineering (Female)	0	0	0	0	0	0
Faculty in Maths, Science & Humanities teaching in engineering Programs (Male)	0	0	0	0	0	0
Faculty in Maths, Science & Humanities teaching in engineering Programs (Female)	0	0	0	0	0	0
Non-teaching staff (Male)	0	0	0	0	0	0
Non-teaching staff (Female)	0	0	0	0	0	0

10 Total number of Engineering students:

Engineering and Technology- UG	☑ Shift1	☐ Shift2
Engineering and Technology- PG	☑ Shift1	☐ Shift2
Engineering and Technology- Polytechnic	☐ Shift1	☑ Shift2
MBA	☑ Shift1	☐ Shift2
MCA	☐ Shift1	☐ Shift2

Engineering and Technology- UG Shift-1

Course Name	2022-23	2021-22	2020-21
Total no. of Boys	2813	2675	2394
Total no. of Girls	1708	1505	1372
Total	**4521**	**4180**	**3766**

Engineering and Technology- PG Shift-1

Course Name	2022-23	2021-22	2020-21
Total no. of Boys	41	54	82
Total no. of Girls	35	34	43
Total	**76**	**88**	**125**

Engineering and Technology- Polytechnic Shift-2

Course Name	2022-23	2021-22	2020-21
Total no. of Boys	659	609	567
Total no. of Girls	171	124	118
Total	**830**	**733**	**685**

Engineering and Technology- MBA Shift-1

Course Name	2022-23	2021-22	2020-21
Total no. of Boys	164	155	166
Total no. of Girls	100	89	113
Total	**264**	**244**	**279**

11 Vision of the Institution:

Our vision is to impart futuristic technical education to transform the students into technically superior, ethically strong, and self-disciplined to serve the nation as a valuable resource.

12 Mission of the Institution:

M1	To inculcate quality education by implementing innovative teaching-learning methods and state-of-the-art facilities.
M2	To enrich the intellectual know-how, credibility, and integrity of the students to necessitate industry
M3	To recognize as scholarly and influential leaders in engineering education and to develop human power with creativity and passion for the advancement of future nations.

13 Contact Information of the Head of the Institution and NBA coordinator, if designated:

Head of the Institution	
Name	Dr. G V K Murthy
Designation	Principal
Mobile No.	9703020577
Email ID	principal@pace.ac.in

NBA Coordinator, If Designated

Name	Dr. T R Chaitanya
Designation	Professor in Dept. of CSE
Mobile No.	9581456542
Email ID	chaitanya_tr@pace.ac.in

PART B: Criteria Summary

Critera No.	Criteria	Total Marks	Institute Marks
1	VISION, MISSION AND PROGRAM EDUCATIONAL OBJECTIVES	50	50.00
2	PROGRAM CURRICULUM AND TEACHING - LEARNING PROCESSES	100	100.00
3	COURSE OUTCOMES AND PROGRAM OUTCOMES	175	175.00
4	STUDENTS' PERFORMANCE	100	80.17
5	FACULTY INFORMATION AND CONTRIBUTIONS	200	177.82
6	FACILITIES AND TECHNICAL SUPPORT	80	80.00
7	CONTINUOUS IMPROVEMENT	75	75.00
8	FIRST YEAR ACADEMICS	50	46.24
9	STUDENT SUPPORT SYSTEMS	50	50.00
10	GOVERNANCE, INSTITUTIONAL SUPPORT AND FINANCIAL RESOURCES	120	120.00
	Total	**1000**	**954**

Part B : Criteria Summary

1 VISION, MISSION AND PROGRAM EDUCATIONAL OBJECTIVES (50)

Total M

1.1 State the Vision and Mission of the Department and Institute (5)

Tot

Institute

Vision of the institute	Our vision is to impart futuristic technical education to transform the students into technically superior, ethically strong, and self-disciplined to serve the nation as a valuable resource.
Mission of the institute	**M1** To inculcate quality education by implementing innovative teaching-learning methods and state-of-the-art facilities. **M2** To enrich the intellectual know-how, credibility, and integrity of the students to necessitate industry **M3** To recognize as scholarly and influential leaders in engineering education and to develop human power with creativity and passion for the advancement of future nations.
Vision of the Department	To excel in education, research and to prepare the students for the benefit of the society and bring out quality professionals in the field of Electronics and Communication Engineering.
Mission of the Department	**Mission No.** / **Mission Statements** M1: To Impart quality technical education in the area of Electronics and Communication Engineering to make the student a professional graduate engineer by implementing excellent teaching and learning methodologies. M2: To train the students on latest technologies to meet the growing challenges of the industry. M3: To develop talented and committed human resources and to provide an environment for innovative, creative, leadership and team spirit. M4: To equip the students with strong fundamentals and to enable them to continue the education.

1.2 State the Program Educational Objectives (PEOs) (5)

Tot

Institute

PEO No.	Program Educational Objectives Statements
PEO1	Graduates will be successful as Professionals, Researchers or Entrepreneurs in Electronics and Communication Engineering discipline.
PEO2	Graduates will be updated continuously with the state-of-the-art technologies through academic and non-academic education in order to provide sustainable solutions.
PEO3	Graduates will demonstrate ethical and social responsibilities as an individual and as a team member in diverse culture.

1.3 Indicate where the Vision, Mission and PEOs are published and disseminated among stakeholders (15)

Tota

Institute

The Vision, Mission and PEO statements are displayed in various places enabling clear dissemination among internal stakeholders (i.e., Management, Staff members, and Students) and external stakeholders (i.e. Parents, Employers, Alumni… etc). These are explained to stakeholders at different interactive sessions.

Adequacy in respect of publication & dissemination

The department Vision, Mission and PEO statements are available on the college website.

The department magazine which includes Vision, Mission and PEO statements that are disseminated to all stakeholders and placed on the website for clear understanding. The lab manuals and course files also contain all these statements.

The Vision, Mission and PEO statements are displayed in the HoD Chamber, staff rooms, classrooms, laboratories, department library, corridors, and notice boards in order to spread the statements to stakeholders easily.

Process of dissemination among stakeholders

Students: An awareness program is conducted at the time of the induction program for the students to make them aware of the Vision, Mission, and PEO statements. Students are continuously motivated towards the achievement of Vision.

Staff: Newly joined staff members will be inducted Vision, Mission, and PEO statements of the department. Existing staff guides the new staff to achieve the Vision through continuous improvement.

Parents: The Vision, Mission and PEO statements are explained clearly to parents during the induction program.

Alumni Members: The Vision, Mission and PEO statements are explained to alumni members during alumni meetings, organized at regular intervals.

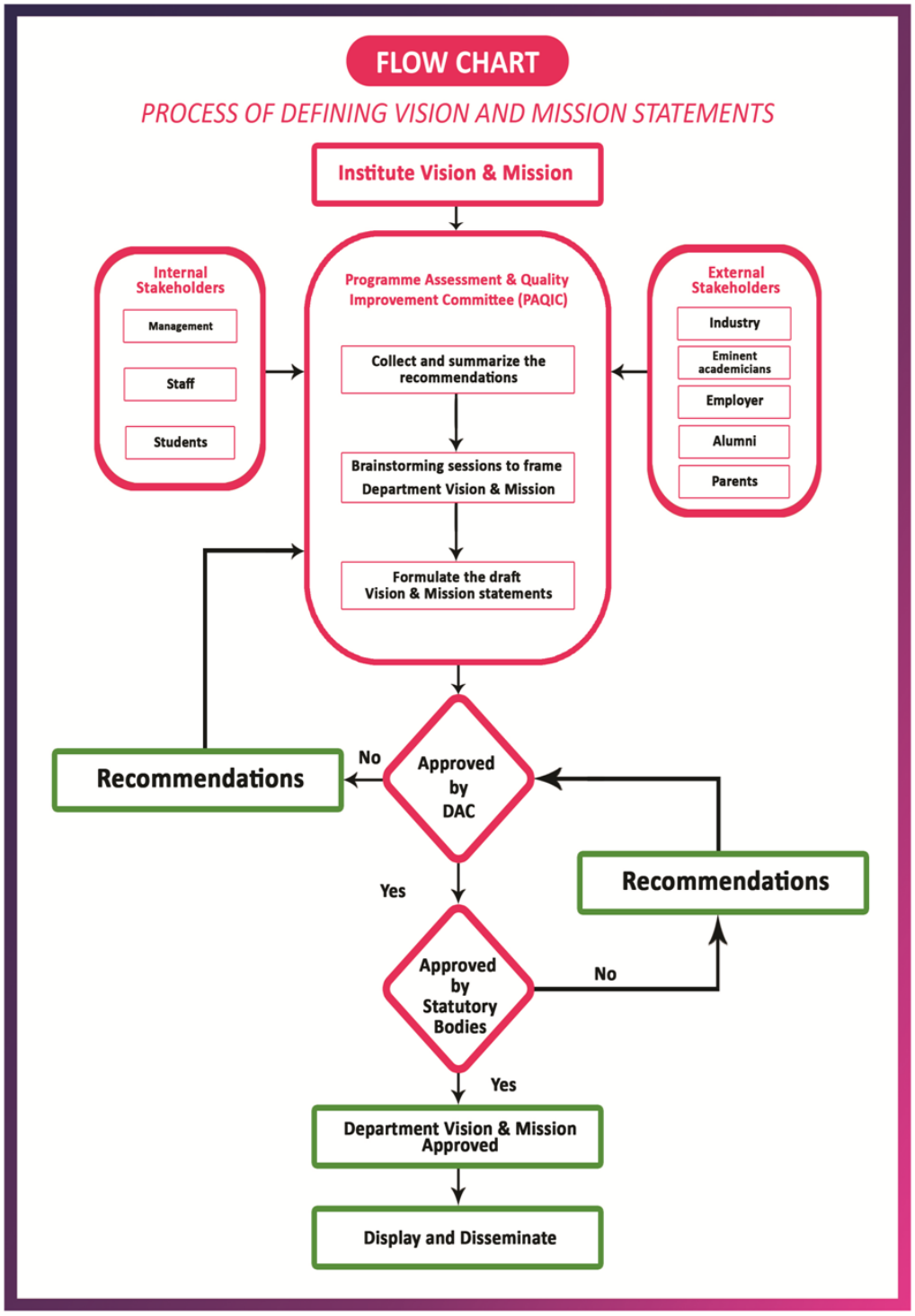
Employers: When employers visit the campus for campus placements or when the placement cell approaches the employers for placement activity, the department brochure contains the Vision, Mission and PEO statements will be shared to them during company visits by placement officer.

1.4 State the process for defining the Vision and Mission of the Department, and PEOs of the program (15)

Tota

Institute

The Process involved in defining the Vision and Mission of the Department



The Department's vision and mission are found through a consultative process involving the stakeholders, faculty of the department, and the Advisory Board members.

1.Department Vision is a derivative component of institute Vision. Department Mission statements express the steps to achieving the department's Vision.

2.The internal (i.e: Management, Staff members, Students) and external stakeholders (i.e: Parents, Employers, Alumni etc) are involved in framing or reframing the Vision and Mission of the department.

3.Programme Assessment and Quality Improvement Committee (PAQIC) collects and summarizes all the stakeholders' recommendations, referring to the department Vision and Mission of reputed institutions, professional bodies, and national and internationa The PAQIC will also look into areas to be addressed and resources availability.

4.Discussions and brainstorming sessions will be made among the PAQIC members to arrive at draft Vision and Mission statements.

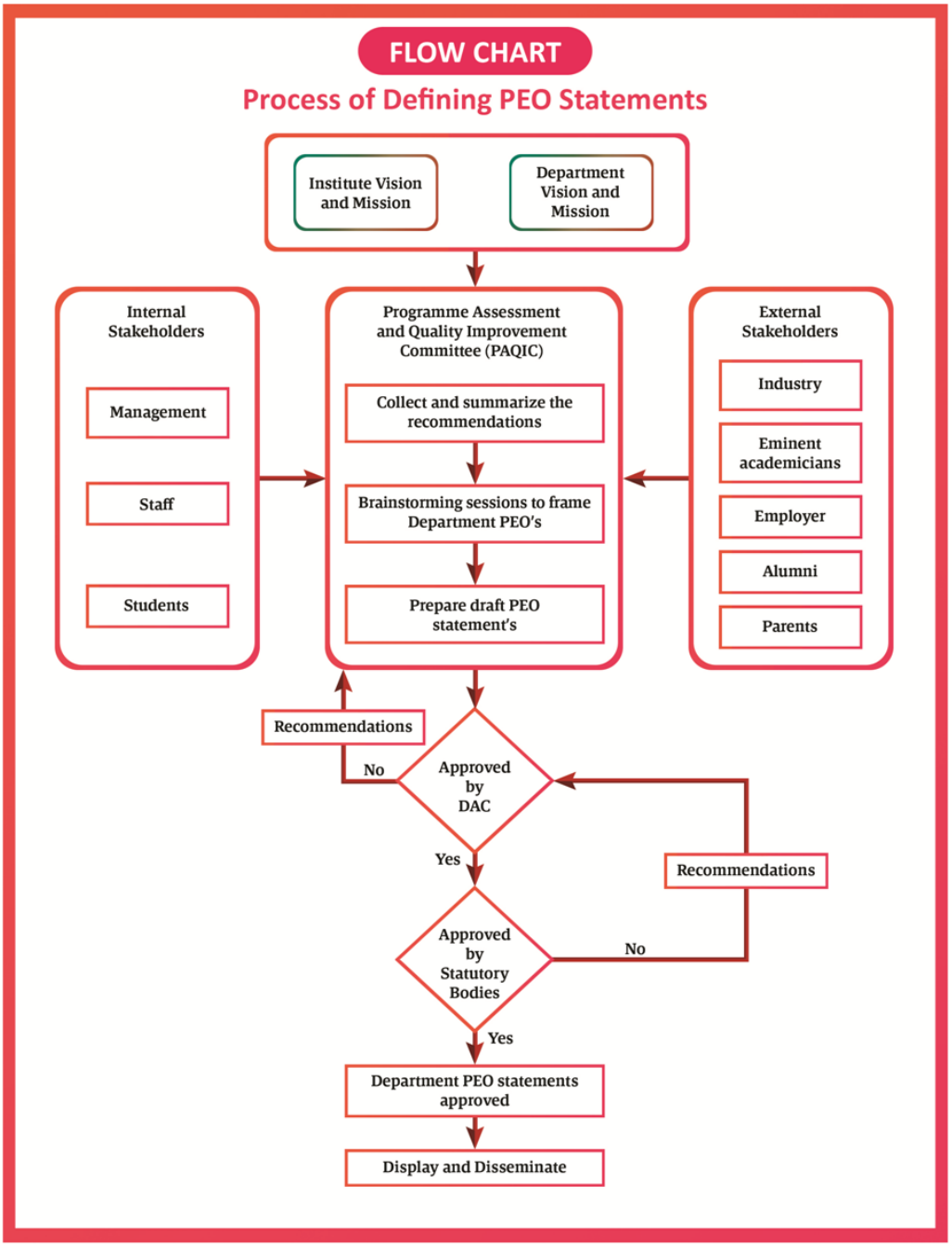
5.The PAQIC will take this forward to the Department Advisory Committee members for suggestions and PAQIC will incorporate all feasible recommendations.

6.The accepted views are analyzed and reviewed to check the consistency with the Vision and Mission of the institute.

7.The department Vision and Mission statements will be presented to the statutory bodies for final approval.

8.The approved Vision & Mission statements will be disseminated among all stakeholders.

The process involved in defining the PEOs of the program



The Program Educational Objectives are established through a consultation process involving the core constituents such as students, alumni, industry, faculty, and employers. The PEOs are established through the following process steps:

1. Program Educational Objectives (PEOs) describe the career and professional accomplishments that the program is preparing graduates to achieve after 3-5 years of completing the program.
2. Department PEO statements are a derivative component of the institute Vision, Mission and department Vision, Mission.
3. The internal (i.e. Management, Staff members, Students) and external stakeholders (i.e. Parents, Employers, Alumni.. etc) are involved in framing or reframing the PEOs of the department.
4. Alumni, Employer suggestions, and employment opportunities available in present and future are considered for framing the PEO statement.
5. Discussions and brainstorming sessions will be made among the PAQIC members to frame PEO statements.
6. The PAQIC send the PEO statements to DAC members for approval.
7. DAC verifies the correlation between the PEOs and Mission statements.
8. After making the feasible modifications suggested by DAC, the Mission statements are passed to statutory committees for approval.
9. The approved PEO statements are disseminated to all stakeholders.

1.5 Establish consistency of PEOs with Mission of the Department (10) Tota

Institute

PEO1 with M1&M4	M1&M4 focuses on creating a successful professional graduate engineer and lifelong learning for continuing education which can be possible by imparting them with knowledge and technical skills. Hence, PEO1 highly correlates with M1 & M4.
PEO1 with M2	M2 highlights training students with latest technologies, where imparting knowledge and technical skills are used to some extent. Therefore, PEO1 moderately correlates with M2.
PEO1 with M3	M3 focus on developing environment for innovative, creative team spirit and leadership career in real life, where imparting knowledge and technical skills are used to a little extent. Therefore, PEO1 lightly correlates with M3.
PEO2 with M2	M2 imparts training students with latest technologies, which can be achieved using modern scientific tools of the industry. So,PEO2 highly correlates with M2.
PEO2 with M1,M3 & M4	M1, M3 &M4 are concentrating on creating a successful professional, talented graduate and lifelong learning for continuing education for achieving this, the student must be updated with the new technologies and tools. Hence, PEO2 moderately correlates with M1,M3 & M4.
PEO3 with M3 & M4	M3 & M4 focus on developing talented graduate and lifelong learning for continuing education. It is possible by developing technical skills and communication skills. Hence, PEO3 highly correlates with M3 & M4.
PEO3 with M1 & M2	M1& M2 highlights imparting knowledge and training students with latest technologies. Hence, PEO3 moderately correlates with M1 & M2.

PEO Statements	M1	M2	M3	M4
Graduates will be successful as Professionals, Researchers or Entrepreneurs in Electronics and Communication Engineering discipline.	3	2	1	3
Graduates will be updated continuously with the state-of-the-art technologies through academic and non-academic education in order to provide sustainable solutions.	2	3	2	2
Graduates will demonstrate ethical and social responsibilities as an individual and as a team member in diverse culture.	2	2	3	3

2 PROGRAM CURRICULUM AND TEACHING - LEARNING PROCESSES (100)

Total Ma

2.1 Program Curriculum (30)

Tota

2.1.1 State the process for designing the program curriculum (10)

Institute

- PACE Institute of Technology and Sciences (PACEITS) is an AUTONOMOUS Institute Accredited by NAAC 'A' Grade and NBA. The B.Tech Electronics and Communication Engineering program curriculum is framed in accordance with AICTE/UGC/APSCHE/JNTUK norms.
- Department of Electronics and Communication Engineering follows a perspective model of discussion forum which preambles the high-level constitution of internal and external stakeholders for the introduction, innovation, and revision of the syllabi.
- The syllabus is framed with extensive emphasis on Employability Skills, Entrepreneurial Skills and Life Long Learning.
- The Feedback on the curriculum is collected from various stakeholders.
- The Faculty Members, Academic peers, Industry Experts, Students and Alumni forms the constitution of Board of Studies (BoS). The feedback from the members of BoS is envisaged in the design of Curriculum.
- The amendment passed by BoS is sent for approval to Academic Council, a statutory body constituted by the Institute. The Academic Council passes a resolution to accept or modify the amendment passed by BoS.

The curriculum preserves the balance in the composition of Basic Sciences, Engineering Sciences, Humanities and Social Sciences, Professional Core, Professional Electives and Open Electives and their distribution is as per the model curriculum of AICTE and Andhra Pradesh State Council of Higher Education (APSCHE) guidelines.

Factors considered for Curriculum Design:

The Curriculum is designed to ensure that the students to have the required domain knowledge and skills for employability. The factors taken into consideration for designing the program curriculum are:

- Model curriculum prescribed by AICTE/UGC/APSCHE/JNTUK
- Department Vision and Mission
- Twelve Program Outcomes (POs) recommended by NBA
- Program Specific Outcomes (PSOs)
- Suggestions from stake holders

The program curriculum is designed based on the broad guidelines of the institute keeping in view of AICTE/JNTUK/UGC/APSCHE directives and program specific criteria to meet the requirements of POs, PSOs and PEOs of the Department. The previous curriculum is found in the design of new curriculum by consulting Industry persons, parents, alumni, and students. Technological developments constitute important criteria while designing the program curriculum.

The Program Assessment and Quality Improvement Committee (PAQIC) and faculty members design the course content to meet out the requirement of COs. The individual courses are then discussed specifically for their outcomes in the department advisory committee (DAC) meetings. The committee points out the deficiencies of the curriculum keeping in view the various inputs and returns the same to the faculty for review. Once the DAC is satisfied with the contents of the curriculum, it is submitted to the program specific Board of Studies (BoS) meeting. The BoS evaluates the curriculum in terms of POs, PSOs and PEOs, and various inputs. The BoS submits the same to the PAQIC, chaired by the HOD. Again the curriculum is subjected to evaluation so that the contents fulfill all the statutory requirements, else it is again returned for review. Finally, the program curriculum is submitted to the Academic Council (AC), which is the highest academic body of the institute.

The process of framing the program curriculum is shown in the Figure 2.1.1a.

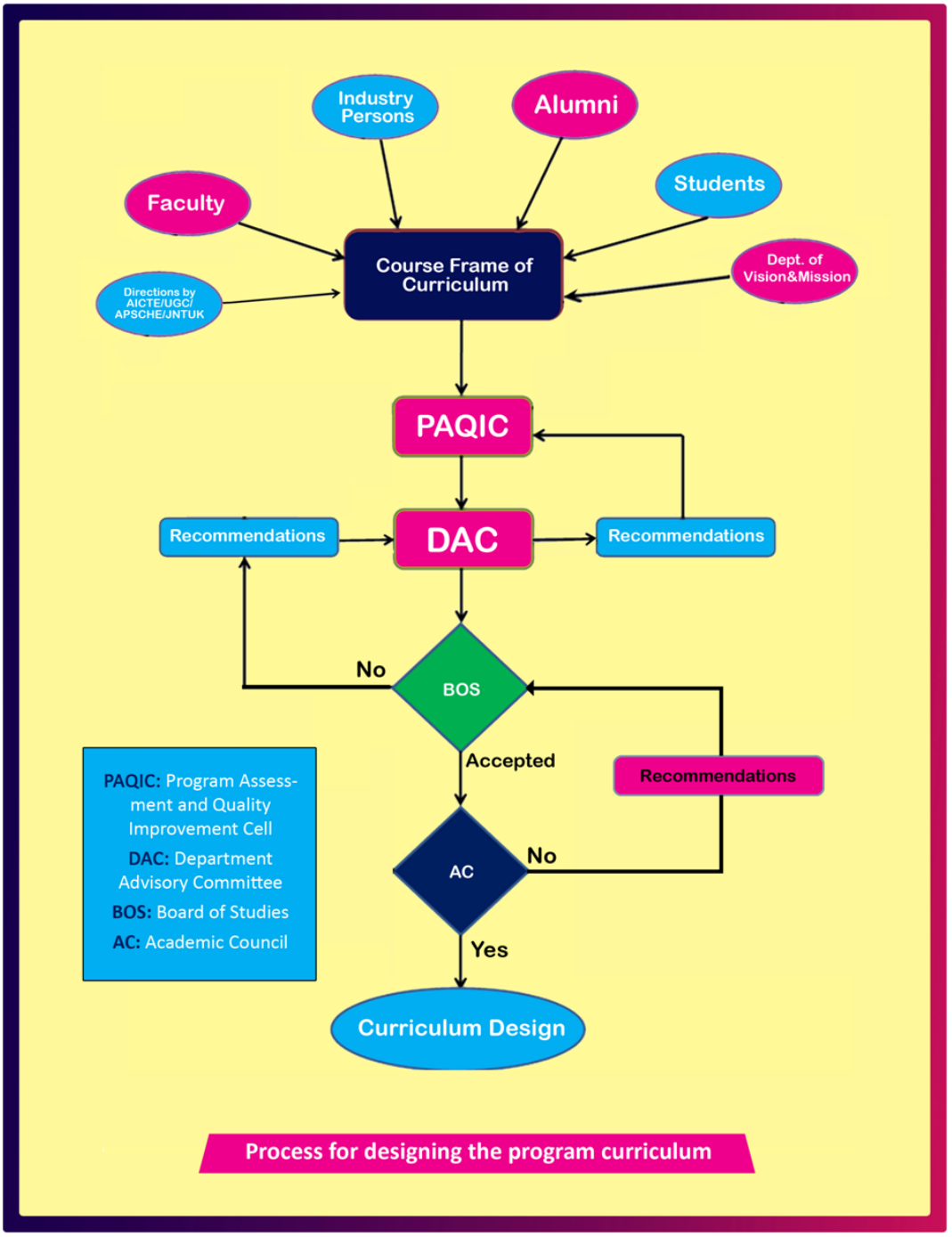


Figure 2.1.1a: Process involved in the design of the program curriculum

Table 2.1.1a: Regulations implemented as per the academic year

S.No.	Regulation	ImplementedAcademic Year
1	R18	2018-19
2	R21	2021-22

Table 2.1.1b: Functions and Responsibilities of Competent Authorities

S.No.	Names of academic and administrative bodies	Functions and responsibilities

1	**Academic Council**	The Academic Council is the highest academic body which decides and advices on all academic matters. Academic proposals of BoS from each department are scrutinized and approved with or without modifications by the academic council. It also recommends/advise the Governing Body on proposals for new programme of study and other academic matters. • Scrutinize and approve the proposals with or without modification of the Boards of Studies with regard to courses of study, academic regulations, curricula, syllabi and modifications thereof, instructional and evaluation arrangements, methods, procedures relevant there to etc., provided that where the Academic Council differs on any proposal, it will have the right to return the matter for reconsideration to the Board of Studies concerned or reject it, after giving reasons to do so. • Implement the orders issued time to time by the State Government and the affiliating University in the admission of students to different programs of study offered by the college. • Make regulations for sports, extra-curricular activities, and proper maintenance and functioning of the playgrounds and hostels. • Frame regulations in consistent with university norms to conduct examinations and initiate measures for improving the quality of teaching, students' evaluation and advisory system in the College. • Encourage faculty members to undertake sponsored research, industrial consultancy, continuing education and related activities. • Recommend to the Governing Body proposals for institution of new programs study. • Recommend to the GB the institution of scholarships, fellowships, prizes and medals, and to frame regulations for the award of the same. • Advise the GB on suggestions pertaining to academic affairs made by it. • Perform such other functions as may be assigned by the Governing Body.
2	**Board of Studies**	• Prepare syllabi for various courses keeping in view the objectives of the institute, interest of the stakeholders and national requirement, for consideration and approval of the Academic Council • Suggest methodologies for innovative teaching and evaluation techniques • Suggest panel names to the Academic Council for appointment as paper setters, evaluators, examiners etc. • Coordinate research, teaching, extension and other academic activities in the department/college • Elaborate discussions on starting new courses, programs etc.
3	**Department Advisory Committee (DAC)**	• The DAC interacts and maintains liaison with stakeholders • The DAC is chaired by HOD who receives the report of the DAC and monitors the progress of the program. • The Committee develops and recommends new or revised goals and objectives of the program. • Based on the inputs received from PAQIC, the committee reviews and analyzes the gap between curriculum and industry requirements and gives necessary feedback or advice actions. • Recommends MOOCs courses like NPTEL, spoken tutorial, etc, FDP, STTPs/ Guest Lectures monitoring, Budget proposal and Lab facilities. • Review on student feedback.
4	**Program Assessment Quality Improvement Cell (PAQIC)**	• Track the results of Program Outcomes (POs), Program Specific Outcomes (PSOs) and Program Educational Objectives (PEOs), and plan the steps required to achieve POs, and PSOs • Evaluates program effectiveness and proposes necessary changes for continuous improvement • Prepares periodic reports on program activities, progress status or other special reports for management key stake holders • Review on Exit Survey, Alumni Survey, and Employer Survey • Motivates the faculty and students towards attending workshops, developing projects, working models, paper publications and records • Interact with stakeholders and DAC to facilitate the achievement of POs, PSOs, and maintain track record and current status • Program Assessment Committee meets periodically to review the program and submits report to Department Advisory Committee

2.1.2 Structure of the Curriculum (5)

Institute

ID	Course Code	Course Title	Lecture (L)	Tutorial (T)	Practical (P)	Total Hours	Theory Credits	Practical Credits	Total Credits
1	P18HST01	English-I	3	0	0	3	3	0	3
2	P18BST01	Mathematics-I	3	0	0	3	3	0	3
3	P18BST03	Applied Physics	3	0	0	3	3	0	3
4	P18EST03	C-Programming for Problem Solving	3	0	0	3	3	0	3
5	P18EST02	Engineering Graphics	1	0	3	4	2.5	0	2.5
6	P18HSL01	English language communication skills lab	0	0	3	3	0	1.5	1.5
7	P18BSL01	Applied physics lab	0	0	3	3	0	1.5	1.5
8	P18ESL03	C-Programming for Problem Solving Lab	0	0	3	3	0	1.5	1.5
9	P18ESL02	Engineering workshop	0	0	3	3	0	1.5	1.5
10	P18MCT01	Induction Program	3	0	0	3	0	0	0
11	P18HST02	English-II	3	0	0	3	3	0	3
12	P18BST02	Mathematics -II	3	0	0	3	3	0	3
13	P18BST05	Applied chemistry	3	0	0	3	3	0	3
14	P18EST01	Basic Electrical & Electronics Engineering	3	0	0	3	3	0	3
15	P18EST05	Python Programming	3	0	0	3	3	0	3
16	P18BSL03	Applied Chemistry Lab	0	0	3	3	0	1.5	1.5
17	P18ESL01	Basic Electrical & Electronics Engineering Lab	0	0	3	3	0	1.5	1.5
18	P18ESL04	Python Programming Lab	0	0	3	3	0	1.5	1.5
19	P18BST07	Mathematics -III	3	0	0	3	3	0	3
20	P18ECT01	Semiconductor Devices and circuits	3	0	0	3	3	0	3
21	P18ECT02	Signals and Systems	3	1	0	4	4	0	4
22	P18ECT03	Switching Theory and Logic Design	3	0	0	3	3	0	3
23	P18EET16	Network Theory	3	0	0	3	3	0	3
24	P18CST02	Data structures	3	1	0	4	4	0	4
25	P18ECL01	Semiconductor Devices and circuits Lab	0	0	3	3	0	1.5	1.5
26	P18CSL02	Data structures Lab	0	0	3	3	0	1.5	1.5
27	P18MCT02	Environmental Sciences	2	0	0	2	0	0	0
28	P18ECT04	Electronic Circuit Analysis	3	0	0	3	3	0	3
29	P18ECT05	Electromagnetic waves and Transmission Lines	3	0	0	3	3	0	3
30	P18ECT06	Analog communications	3	0	0	3	3	0	3
31	P18ECT07	Pulse and Digital circuits	3	0	0	3	3	0	3
32	P18ECT08	Random Variables and Stochastic Process	3	0	0	3	3	0	3
33	P18ECL02	Electronic Circuit Analysis Lab	0	0	3	3	0	1.5	1.5
34	P18ECL03	Analog communications Lab	0	0	3	3	0	1.5	1.5
35	P18ECL04	Pulse and Digital circuits Lab	0	0	3	3	0	1.5	1.5
36	P18MCT07	IPR & Patents	2	0	0	2	0	0	0
37	P18ECT09	Linear & Digital IC Applications	3	0	0	3	3	0	3
38	P18ECT10	Digital Communications	3	0	0	3	3	0	3
39	P18ECT11	Antenna and Wave Propagation	3	0	0	3	3	0	3
40	P18EET05	Control Systems	3	1	0	4	4	0	4
41	P18XXOXX	Open Elective-I	2	0	0	2	2	0	2

42	P18ECL05	Linear & Digital IC Applications Lab	0	0	3	3	0	1.5	1.5
43	P18ECL06	Digital Communications Lab	0	0	3	3	0	1.5	1.5
44	P18MCT08	Design Thinking for Innovation	4	0	0	4	2	0	2
45	P18MCT09	Biology	2	0	0	2	0	0	0
46	P18ECIO1	Internship	0	0	0	0	2	0	2
47	P18ECT12	Digital Signal Processing	3	0	0	3	3	0	3
48	P18ECT13	VLSI Design	3	0	0	3	3	0	3
49	P18ECT14	Microprocessors and Micro Controller	3	0	0	3	3	0	3
50	P18ECT15	Microwave Engineering	3	0	0	3	3	0	3
51	P18XXOXX	Open Elective-II	2	0	0	2	2	0	2
52	P18ECL08	Digital Signal Processing Lab	0	0	3	3	0	1.5	1.5
53	P18ECL07	Microprocessors and Micro Controller Lab	0	0	3	3	0	1.5	1.5
54	P18ECL09	VLSI Design Lab	0	0	3	3	0	1.5	1.5
55	P18MCT13	Entrepreneurship	2	0	0	2	0	0	0
56	P18ECM01	Mini Project	0	0	4	4	0	2	2
57	P18ECT16	Digital Image Processing	3	0	0	3	3	0	3
58	P18ECT17	Radar Systems	3	0	0	3	3	0	3
59	P18ECT20	Internet of Things	3	0	0	3	3	0	3
60	P18ECEXX	Professional Elective-I	3	0	0	3	3	0	3
61	P18ECEXX	Professional Elective-II	3	0	0	3	3	0	3
62	P18XXOXX	Open Elective-III	2	0	0	2	2	0	2
63	P18ECL12	Microwave Engineering and Optical Communication Lab	0	0	3	3	0	1.5	1.5
64	P18ECL10	Internet of Things Lab	0	0	3	3	0	1.5	1.5
65	P18MCT14	Employability Skills	2	0	0	2	0	0	0
66	P18ECEXX	Professional Elective-III	3	1	0	4	4	0	4
67	P18ECEXX	Professional Elective-IV	3	1	0	4	4	0	4
68	P18ECS01	Seminar	2	0	0	2	1	0	1
69	P18ECP01	Project	0	0	12	12	0	6	6
		Total	**131**	**5**	**76**	**212**	**123.5**	**36.5**	**160.0**

2.1.3 State the components of the curriculum (5) Institute

Course Components	**Curriculum Content (% of total number of credits of the program)**	**Total number of contact hours**	**Total number of credits**
Basic Sciences	11.25	21.00	18
Engineering Sciences	10.94	25.00	17
Humanities and Social Scie	4.69	9.00	8
Program Core	50	98.00	80
Program Electives	11.25	18.00	18
Open Electives	3.75	6.00	6
Project(s)	5	16.00	8
Internships/Seminars	1.87	2.00	3
Any other (Please specify)	1.25	17.00	2
Total number of Credits			**160**

2.1.4 State the process used to identify extent of compliance of the curriculum for attaining the Program Outcomes and Program Specific Outcomes as mentioned in Annexure I (10) Institute

The curriculum for B.Tech program in Electronics and Communication Engineering maintains balance among various components from Basic Sciences, Engineering Sciences, Humanities and Social Sciences, Professional Core, Professional Electives, Open Electives, Project work & Practical Training/Internship and mandatory courses.

A detailed matrix is prepared by mapping of all courses in the program with POs and PSOs along with their level of correlation: 1 (low), 2 (medium) and 3 (high). The process of measuring the attainment of POs and PSOs through COs is demonstrated and properly documented in criteria 3. If POs and PSOs are not attained as per the specified target levels, then corrective measures will be taken to fill the curriculum gap.

Table 2.1.4a: Details of course code allocation for R-18 regulation

CODE	NAME OF THE COURSE	CODE	NAME OF THE COURSE
I SEMESTER		**II SEMESTER**	
C101	English-I	C110	English-II
C102	Mathematics-I	C111	Mathematics-II
C103	Applied Physics	C112	Applied Chemistry
C104	Programming for Problem Solving	C113	Basic Electrical & Electronics Engineering
C105	Engineering Graphics & Design	C114	Python Programming
C106	English language communication skills Lab-I	C115	Applied Chemistry Lab
C107	Applied Physics Lab	C116	Basic Electrical & Electronics Engineering Lab
C108	Programming for Problem solving Lab	C117	Python Programming Lab
C109	Engineering Workshop Lab		
III SEMESTER		**IV SEMESTER**	
C201	Semiconductor Devices and Circuits	C210	Electronic Circuit Analysis
C202	Signals and Systems	C211	Electromagnetic Waves and Transmission Lines
C203	Switching Theory and Logic Design	C212	Analog Communications
C204	Network Theory	C213	Pulse and Digital Circuits
C205	Mathematics – III	C214	Random Variables and Stochastic Process
C206	Data Structures	C215	Electronic Circuit Analysis Lab
C207	Semiconductor Devices and Circuits Lab	C216	Analog Communications Lab
C208	Data Structures Lab	C217	Pulse and Digital Circuits Lab
C209	Environmental Sciences	C218	IPR & Patents
V SEMESTER		**VI SEMESTER**	
C301	Linear and Digital IC Applications	C310	Digital Signal Processing
C302	Digital Communications	C311	VLSI Design
C303	Antenna and Wave Propagation	C312	Microprocessors and Microcontrollers
C304	Control Systems	C313	Microwave Engineering
C305	Linear and Digital IC Applications Lab	C314	Digital Signal Processing Lab
C306	Digital Communications Lab	C315	Microprocessors and Microcontrollers Lab
C307	Design Thinking for Innovation	C316	VLSI Design Lab
C308	Biology	C317	Entrepreneurship
C309	Internship	C318	Mini Project
C319	OOPS through Java	C320	Introduction to Computer Networks
-	-	C321	Introduction to Database Management Systems
-	-	C322	Introduction to Machine Learning
VII SEMESTER		**VIII SEMESTER**	

C401	Digital Image Processing	C407	Seminar
C402	Radar Systems	C408	Project Work
C403	Internet of Things	C413	Wireless Sensor Networks
C404	Microwave Engineering and Optical Comm. Lab	C414	Satellite Communications-
C405	IoT Lab	C415	Cellular Mobile Communications
C406	Employability Skills	--	--
C409	Embedded & Real time Operating Systems	--	--
C410	Artificial Neural Networks	--	--
C411	Electronic Measurements and Instrumentation	--	--
C412	Fundamentals of Cloud computing	--	--

Table 2.1.4b: Mapping of courses with POs and PSOs for R-18 regulation

Course	PO 1	PO 2	PO3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PS
I SEMESTER														
C101	1.90	1.97	-	-	-	-	-	-	-	-	-	-	-	-
C102	2.62	2.42	2.14	1.17	-	-	-	-	-	-	-	1.54	-	-
C103	2.52	2.35	2.18	2.18	2.18	-	-	-	-	1.68	1.26	0.84	1.18	-
C104	2.54	1.81	2.34	-	-	-	-	-	-	-	-	-	-	-
C105	1.00	-	2.00	-	-	-	2.00	-	2.00	1.00	1.00	3.00	-	-
C106	3.00	2.00	2.00	2.00	-	-	-	-	-	-	-	1.50	-	-
C107	3.00	3.00	-	3.00	2.00	2.00	2.00	-	-	-	-	2.00	1.33	-
C108	1.60	2.00	1.80	1.00	1.00	1.00	-	-	2.00	-	1.60	1.00	-	-
C109	1.90	1.97	-	-	-	-	-	-	-	-	-	-	-	-
II SEMESTER														
C110	-	-	-	-	-	-	-	-	2.00	1.85	-	2.00	-	-
C111	1.64	1.84	-	-	-	-	-	-	-	-	-	-	-	-
C112	1.30	1.41	2.01	-	-	-	-	-	-	-	-	1.67	-	-
C113	1.64	2.18	1.64	-	-	-	0.90	-	-	-	-	-	1.81	0
C114	1.87	1.87	1.87	1.28	1.66	1.11	-	-	-	-	-	1.12	1.19	1
C115	3.00	-	-	3.00	2.00	-	-	-	-	-	-	-	-	-
C116	1.80	1.00	1.00	-	-	1.50	1.00	1.00	1.00	-	-	-	3.00	1
C117	3.00	2.80	2.80	1.33	1.50	1.50	-	-	-	-	-	1.40	1.00	2
III SEMESTER														
C201	2.33	2.33	1.66	2.33	-	-	-	-	-	-	-	1.25	1.55	1
C202	1.47	1.11	1.11	1.04	0.94	-	-	-	-	-	1.29	1.00	1.35	1
C203	2.04	-	2.15	1.73	-	-	-	-	-	-	0.77	1.84	2.26	2
C204	1.87	1.53	1.57	1.36	-	-	-	-	-	-	-	1.36	0.68	0
C205	2.12	2.02	-	-	-	-	-	-	-	-	-	-	0.81	-
C206	2.14	1.42	1.42	1.42	-	-	-	-	-	-	0.71	0.71	-	0
C207	3.00	3.00	2.75	3.00	-	-	-	-	3.00	-	-	3.00	2.25	2
C208	3.00	3.00	2.75	2.25	1.50	-	-	-	-	-	-	1.50	2.33	2
C209	1.24	0.41	0.41	-	-	0.41	0.83	-	-	-	-	0.41	-	-
IV SEMESTER														
C210	1.90	2.04	2.04	1.94	-	-	-	-	-	-	-	1.66	2.04	1
C211	1.84	2.04	2.06	1.66	-	1.40	-	-	-	-	-	1.86	1.92	1
C212	1.30	1.30	1.30	1.30	-	-	-	-	-	-	-	1.30	1.30	1
C213	1.99	1.72	1.72	1.12	-	-	-	-	-	-	2.52	1.55	1.55	1
C214	3.00	3.00	2.60	2.20	2.00	-	-	-	-	-	2.00	2.40	2.40	2
C215	3.00	2.67	3.00	2.67	1.00	-	-	-	3.00	-	-	2.00	2.00	2
C216	2.00	-	2.00	-	2.00	2.00	-	-	2.00	-	-	2.00	2.00	2
C217	2.75	2.50	2.25	2.33	2.00	-	-	-	2.00	-	-	2.00	2.75	2
C218	0.64	0.40	0.40	-	-	0.93	0.40	0.20	0.40	0.20	0.50	-	-	-
V SEMESTER														
C301	1.08	2.04	1.54	1.38	1.56	-	-	-	-	-	1.38	1.48	1.65	1
C302	1.52	1.82	2.07	1.79	1.55	-	-	-	-	-	-	1.53	1.15	1
C303	1.57	2.36	2.06	2.20	1.89	1.61	1.52	-	-	-	-	1.57	2.36	1
C304	1.40	1.71	1.33	-	-	-	-	-	-	-	-	-	0.62	-
C305	2.50	2.00	2.00	-	2.00	-	-	-	2.00	-	-	2.00	2.00	2
C306	2.00	-	2.00	2.00	-	-	-	-	2.00	-	-	2.00	2.00	2

C307	2.00	2.00	2.00	2.00	2.00	2.00	-	-	1.00	1.00	-	-	2.00	3	
C308	0.63	2.00	1.88	-	-	-	-	-	-	-	-	1.09	-	-	
C309	2.67	2.00	2.67	-	-	-	-	-	-	-	-	-	2.67	-	
C319	1.46	1.04	1.35	-	-	-	-	-	-	-	-	-	1.46	-	
VI SEMESTER															
C310	2.33	2.33	2.16	1.86	1.69	-	-	-	-	-	1.26	1.28	1.58	2	
C311	1.00	2.00	2.22	2.52	3.00	-	-	-	-	-	2.08	2.08	2.11	2	
C312	2.18	1.98	1.68	1.60	1.60	1.68	-	-	-	-	-	1.85	1.68	1	
C313	2.68	2.41	2.41	2.50	2.34	-	-	-	-	-	2.00	2.61	2.41	2	
C314	3.00	3.00	3.00	3.00	2.75	-	-	-	3.00	-	1.00	1.00	1.50	2	
C315	2.20	2.25	2.00	2.00	2.00	2.00	2.00	-	2.00	-	2.25	2.20	1.80	2	
C316	-	-	3.00	-	2.00	-	-	-	2.00	-	1.00	2.00	2.50	3	
C317	0.51	0.40	0.40	0.40	-	-	-	0.40	0.20	0.20	0.76	0.51	-	-	
C318	2.00	3.00	2.00	2.50	3.00	3.00	-	1.00	2.00	2.67	2.67	2.00	3.00	-	
C320	3.00	3.00	2.80	2.20	1.00	1.40	0.00	0.00	0.00	0.00	0.00	1.60	0.00	0	
C321	3.00	3.00	2.60	2.20	2.40	1.20	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0	
C322	3.00	3.00	2.80	3.00	3.00	2.00	1.00	0.00	0.00	0.00	0.00	1.60	0.00	0	
VII SEMESTER															
C401	2.06	1.90	1.97	1.80	1.45	1.40	-	-	-	-	1.40	1.45	1.45	1	
C402	1.70	1.70	1.17	0.88	0.78	-	-	-	-	-	1.02	-	1.57	-	
C403	2.47	2.41	2.21	2.41	1.87	0.94	0.94	-	-	-	-	1.47	1.87	1	
C404	3.00	3.00	-	2.75	-	2.00	2.00	-	2.50	-	-	2.00	2.00	2	
C405	-	-	3.00	-	3.00	-	3.00	-	3.00	-	3.00	3.00	3.00	2	
C406	-	-	-	-	-	1.16	1.16	-	1.25	1.16	1.45	1.25	-	-	
C409	2.00	2.75	2.25	2.00	0.00	1.00	0.00	0.00	0.00	0.00	1.25	2.00	2.00	3	
C410	2.80	3.00	2.40	2.20	2.33	2.00	0.00	0.00	2.33	0.00	1.80	1.80	2.00	2	
C411	3.00	2.25	3.00	2.50	2.25	2.00	1.50	2.00	2.33	1.00	1.50	0.00	2.00	2	
C412	3.00	3.00	2.80	2.20	2.20	1.40	0.00	0.00	0.00	0.00	0.00	1.60	0.00	2	
VIII SEMESTER															
C407	2.00	3.00	2.00	2.50	3.00	3.00	-	1.00	2.00	2.67	2.67	2.50	3.00	-	
C408	2.75	2.75	2.50	3.00	3.00	3.00	3.00	2.00	3.00	2.25	2.75	3.00	3.00	2	
C413	2.20	1.00	2.00	1.00	1.33	0.00	2.00	0.00	0.00	0.00	1.67	2.00	1.40	0	
C414	2.40	2.00	2.00	2.00	1.75	0.00	1.67	0.00	0.00	0.00	0.00	0.00	2.80	0	
C415	1.04	1.15	1.72	1.72	0.00	1.15	0.00	0.00	0.00	0.00	1.15	1.72	1.10	0	
Number of Courses mapped	**64**	**59**	**59**	**47**	**36**	**25**	**17**	**7**	**23**	**12**	**28**	**54**	**49**		

Number of courses mapped to each PO and PSO

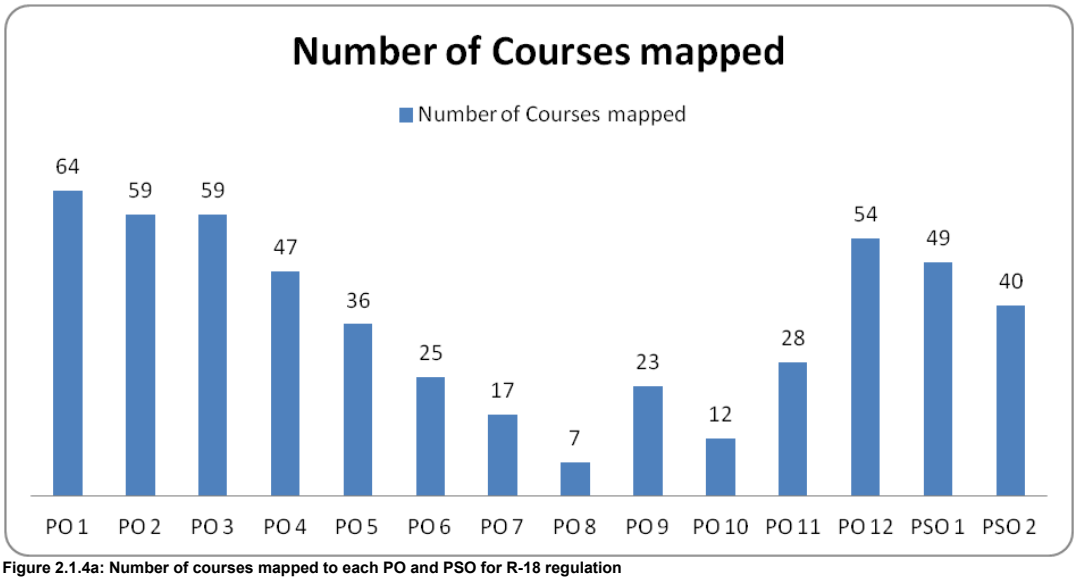


Figure 2.1.4a: Number of courses mapped to each PO and PSO for R-18 regulation

The following is the flow diagram of process used extent of compliance of the curriculum for attaining the program outcomes and program specific outcomes.

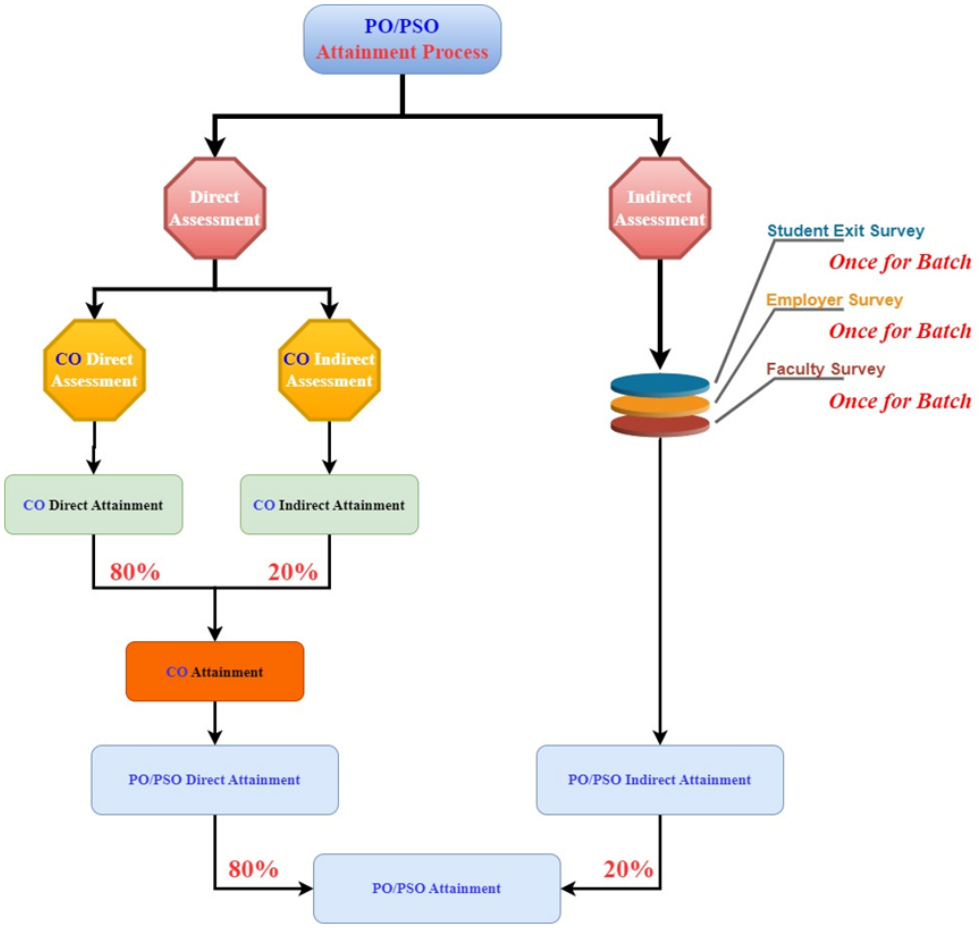


Figure 2.1.4b: Flow diagram of curriculum for attaining the PO'S and PSO'S

2.2 Teaching-Learning Processes (70) Tota

2.2.1 Describe Processes followed to improve quality of Teaching & Learning (15)

Institute

The quality improvement in teaching and learning of the department is achieved through a well-defined system of an academic procedure, which is given below:

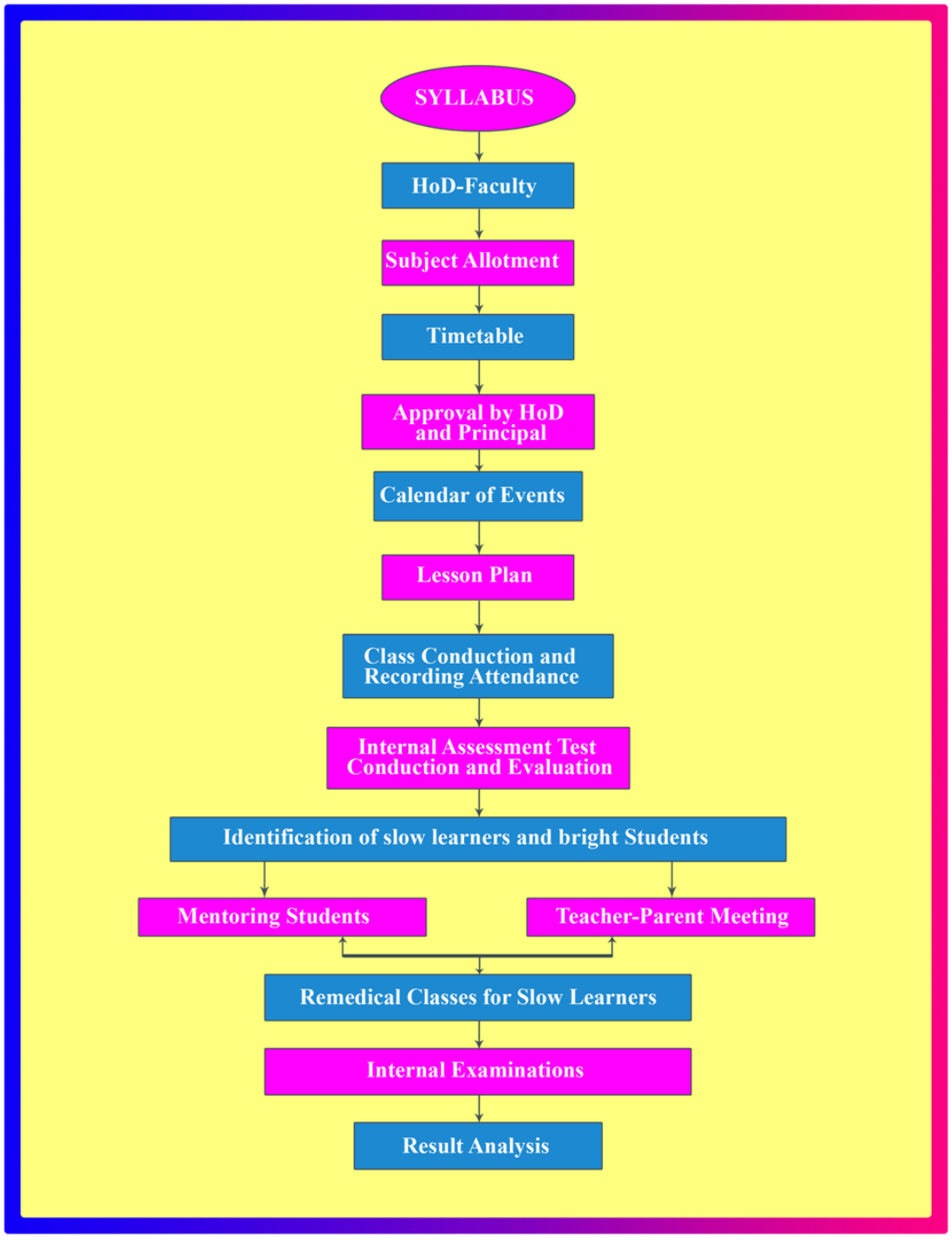


Figure 2.2.1a: Flow diagram of teaching and learning process

The quality of teaching and learning process is improved through the following implementations:

PLANNING:

A. ADHERENCE TO ACADEMIC CALENDAR

In the beginning of every academic year, the college Academic Council Committee prepares well planned academic calendar and distribute it to all faculty members and students.

The academic calendar consists of:

- Date of commencement of the academic session
- Duration of semester
- Commencement of Continuous Internal Evaluation (CIE) test
- Last instruction day
- Preparation period and practical exams
- Commencement of practical and semester end examinations(SEE)

Figure 2.2.1b: Shows the Sample copy of academic calendar of the college.

Figure 2.2.1b: Sample copy of academic calendar of the college

In addition to the Institute academic calendar the department also prepares the event wise calendar, gives the schedules of the program, like FDPs, workshops, Guest lectures and seminars etc. to be conducted in the department. Figure 2.2.1c show that department events.

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CIRCULAR

The Proposed Academic Calendar for IV Year I & II Semester B.Tech Programme during the Academic year 2022-23 is detailed below.

B.Tech IV Year I Semester			
Description	From	To	Weeks
Commencement of I Semester Class Work	04/07/2022		
I Unit of Instructions	04/07/2022	27/08/2022	8W
Assignment-I & Class Room Test-I	25/07/2022	30/07/2022	1W
Assignment-II & Class Room Test-II	15/08/2022	20/08/2022	1W
I Mid Examinations	29/08/2022	03/09/2022	1W
II Unit of Instructions	05/09/2022	29/10/2022	8W
Assignment-III & Class Room Test-III	12/09/2022	17/09/2022	1W
Assignment-IV & Class Room Test-IV	03/10/2022	08/10/2022	1W
Assignment-V & Class Room Test-V	24/10/2022	29/10/2022	1W
II Mid Examinations	31/10/2022	05/11/2022	1W
Practical Examinations & Preparation	07/11/2022	12/11/2022	1W
Semester End Examinations	14/11/2022	26/11/2022	2W
B.Tech IV Year II Semester			
Commencement of II Semester Class Work	05/12/2022		
I Unit of Instructions	05/12/2022	28/01/2022	8W
Assignment-I & Class Room Test-I	26/12/2022	31/12/2022	1W
Assignment-II & Class Room Test-II	16/01/2023	21/01/2023	1W
I Mid Examinations	30/01/2023	04/02/2023	1W
II Unit of Instructions	06/02/2023	01/04/2023	8W
Assignment-III & Class Room Test-III	*13/02/2023*	*18/02/2023*	*1W*
Assignment-IV & Class Room Test-IV	06/03/2023	11/03/2023	1W
Assignment-V & Class Room Test-V	27/03/2023	01/04/2023	1W
II Mid Examinations	03/04/2023	08/04/2023	1W
Practical Examinations & Preparation	10/04/2023	15/04/2023	1W
Semester End Examinations	17/04/2023	29/04/2023	2W

Controller of Examinations

PRINCIPAL

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Details of teachers invited as resource persons for Seminars, Workshops, Conferences at national and international levels for the Academic Year 2022-23.

S.No.	EVENT	Month& Year	Details of the Resource Person	Nature of Events
1	SEMINAR	November, 2022	Dr.B.Prudhvi Nadh, Assistant Professor, DIET,Vijayawada.	**Seminar on Biomedical Antenna for Various Disease Diagnosis**
2	SEMINAR	November, 2022	Dr.D.Anil Kumar, Assistant Professor,DEAN R&D,PACE ITS.	Seminar on **Artificial Intelligence vs Machine Learning vs Deep Learning**
3	WORKSHOP	December 2022	Mr.V.Govinda Rao,Microlink member Mr.M.Sambasiva Rao Mr.Ch.Kishore Mr.V.Govinda Rao	WORKSHOP on **"Designing and Manufacturing of PCB's"**
4	GUEST LECTURE	December 2022	Dr.Ch.V.M.S.N.Pavan Kumar, Assistant professor,BEC Bapatla.	Guest lecturer on **"Analog Circuits"**
5	GUEST LECTURE	December 2022	Mr.Ch.V.M.S.N.Pavan Kumar, Assistant professor,BEC Bapatla.	Guest Lecture on **"Recent Trends in Signal Processing for Innovations"**

ACADEMIC YEAR: 2022-2023

Number of workshops organised : 01
Number of seminars organised : 02
Number of Webinars organised : 00
Number of Guest lectures organised : 02
Total :05

HOD
HEAD OF THE DEPARTMENT
ELECTRONICS & COMMUNICATION ENGINEERING
PACE INSTITUTE OF TECHNOLOGY & SCIENCES
(AUTONOMOUS)
VALLUR, ONGOLE-523 272, ANDHRA PRADESH

Figure 2.2.1c: Sample copy of events of the department

Subject Allocation:

The department adopts a well-defined process for course allotment to see that workload is distributed properly.

Lecture Plan:

- Course allocation is made before the commencement of every semester based on the competencies and choice of the faculty members.
- Once the courses are allocated, faculty prepares a lecture plan indicating the topics covered lecture wise based on the course objectives and course outcomes.
- The module coordinator looks after the delivery of the course content and supervises preparation of question papers to improve the quality of the question paper.

Table 2.2.1a: List of modules and relevant courses for core engineering subjects of ECE curriculum

S.No	Name of the Module	Relevant courses	Name of Module Coordinator
1	Electronic Devices and Circuits	• Semiconducor Devices & Circuits • Electronic Circuit Analysis • Pulse Digital Circuits • LDIC • Switching Theory and Logic Design • Nano Electronics • Power Electronics •	S.Ch.Kantharao
2	Embedded Systems	• Microprocessors and Microcontrollers • Embedded and Real Time Operating Systems • Control Systems	M.Balasubrahmanyam
3	Advance Technology	• Internet of Things	M. Raja Kumar

4	VLSI	• VLSI Design • Analog IC Design • Low Power VLSI Design • Digital IC Design	Dr.G.Erna
5	Communication Systems	• Analog Communications • Digital Communications • Antennas & Wave Propagation • Electromagnetic Waves and Transmission Lines • Micro Wave Engineering • Introduction to Computer Networks • Electronic Switching Systems	Dr. R.Venkateswarlu
6	Advanced Communication Systems	• Cellular and Mobile Communications • Satellite Communications • Radar Systems • Wireless Sensor Networks • Optical Communications	Dr.M.Rajashekar
7	Signal Processing	• Signals & Systems • Digital Signal Processing • Speech Processing	Dr. Sk.Subhani
8	Image Processing	• Digital Image Processing	Dr. D.Anil Kumar
9	Instrumentation	• Electronic Measurements and Instrumentation • Bio Medical Instrumentation	N.D.Parameswara Rao
10	Computing Systems	• Fundamentals of Big Data • Fundamentals of Cloud Computing • Introduction to Data Science • Introduction to Database Management Systems • Block Chain Technology	K.Suresh Babu
11	Neural Networks	• Adhoc Networks • Machine Learning for Signal Processing • Artificial Neural Networks • Introduction to Machine Learning	Dr.D.Anil Kumar

B. PEDAGOGICAL INITIATIVES

Electronics and Communication Engineering being a rapidly changing field which requires continuous learning to be updated in the particular profession and the pedagogies play an important role in development of the content. Faculty members use various pedagogical methods for effective teaching learning process as given below:

- Chalk and White board
- Power point presentation
- Experimental Learning
- Project based learning
- Learning Management System (Moodle)
- Seminars/Workshops/Conferences/Industrial visits
- Technical Training Programmes through Training & Placement Cell (T&P)
- MOOCs Courses -Swayam NPTEL, Coursera, Udaemy, etc
- Collaborative learning
- Interactive learning
- Blended class room

Implementation

The implementation of teaching-learning mechanism is carried out based on the following different activities. Some of the pedagogical implementation methods are given below:

Zoom Online Classes:

During COVID-19 pandemic, the class work is conducted through online in various platforms such as Zoom and which were very effectively used for every course of the program. The faculty can upload course plans, course materials, video lectures, question banks, etc in this platform. Figure 2.2.1d: Shows the Screenshot of the online class conducted in Microsoft Teams by a faculty member.

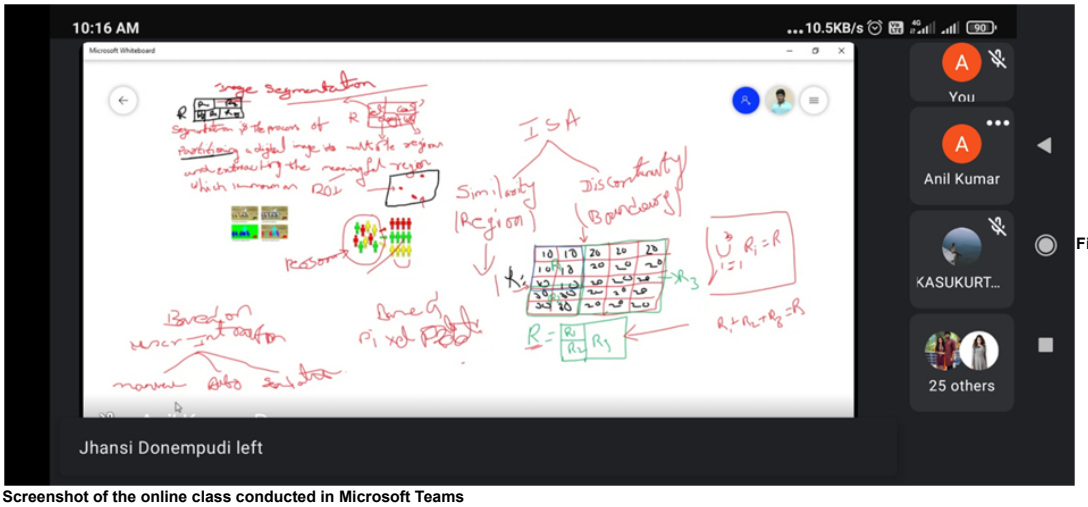

Figure 2.2.1d: Screenshot of the online class conducted in Microsoft Teams

Experimental learning:

- To improve the quality of learning, curriculum of laboratory courses is developed in such a manner to emphasize the concepts learned in theoretical subjects.
- In each semester, two or three laboratory courses are conducted and most of these courses are related to theoretical subjects.
- Both hardware and software based laboratories are equipped with necessary infrastructure to facilitate effective conduction of the experiments in the laboratory.
- Faculty members are assigned for each practical session to assist the students in conducting experiments.
- For the laboratory sessions, detailed instruction manuals are provided for each laboratory course.

- Students are also advised to study the theory and the procedure to conduct the experiment before the laboratory session.
- Students conduct the experiments and record the observations in the observation book. After completion of the experiment, students are encouraged to discuss about obtained results from the experiment.
- The observations are verified by faculty and record books are evaluated.
- As part of testing the learning process, viva-voce is conducted in each laboratory session.

Project based learning:

- The main project work and mini project is carried out by students in VIII & VI Semesters respectively.
- Students in each section are divided into batches consisting of 4-5 students.
- Each batch selects their guide according to the research area of the faculty members.
- Problem identification is done based on the existing solutions collected from literature survey and also identifies the constraints to the problems.

Learning Management System (Moodle):

The college encourages teaching & learning through LMS tool, such as Moodle. Each Department has a Moodle coordinator, who maps the students, courses and faculty at the beginning of the semester in Moodle. Lesson plan, syllabus, assignments, lab manuals and extra material are shared with the students through Moodle. Quiz is conducted through Moodle.

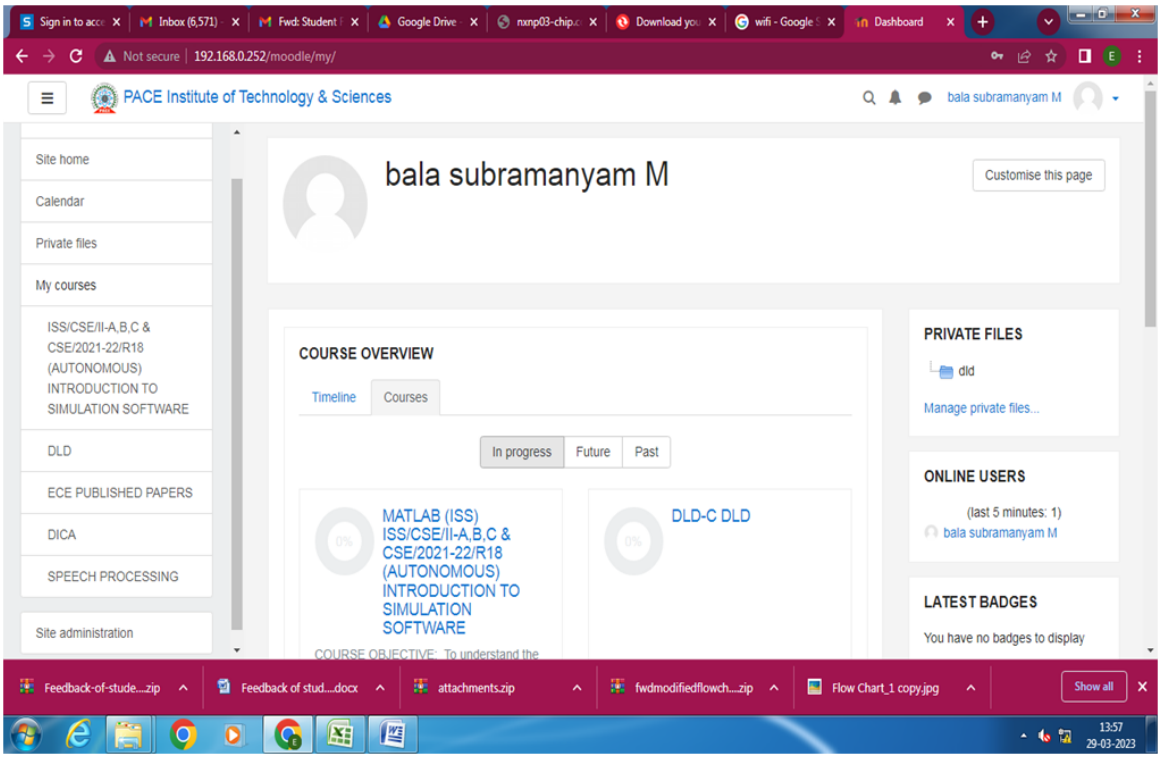

Figure 2.2.1e: Screenshot of the PACE Moodle

Invited Lectures:

The department interacts with the industry and academic experts to deliver Guest lectures/ Seminars/Workshops to students on latest technologies and tools.

- The department has various Student Chapters like IEEE Student Branch, IETE Student's Forum (ISF) and ISTE chapter. These chapters conduct various technical events to the students regularly
- The guest lectures by resource persons from industry, academic and research institutions are frequently arranged by the department

Students are also encouraged to present technical papers at conferences and exhibit their projects in project competitions

Figure 2.2.1f: **Practical training on "**Solar Ambassadors**"**

Table 2.2.1b: List of events organized under Professional societies/ chapters of the Department

2021-22					
S.No.	**Name of the Programme/ Seminar/Workshop**	**Name of the Resource Person and Organization**	**Organized by**	**Date/s of the event**	**No. of Participants**
1	Guest Lecture on IEEE Inauguration	Shri.M.Sai Kumar Tara, SAC Chairman	IEEE	12-11-2021	50
2	Quiz on Basic Electronics	Dr.M.Rajasekhar, Assoc. Professor, ECE, PACEITS, Ongole	IEEE	15-02-2022	40
3	Debate on General Topics Discussion	Dr.M.Rajasekhar, Assoc. Professor, ECE, PACEITS, Ongole	IEEE	10-04-2022	30
4	Seminar on EXPLORE ML	Mr.Anees ahamed Baig Explore ML Facilitator in Google, Vijayawada	IEEE	30-03-2022	64
5	Webinar on Natural Language Processing and its Techniques	Mr.M.Teja Kiran Kumar, Cofounder, Yatri Siksha Technologies Private Limited, Hyderabad.	IEEE	18-12-2022	70
6	Seminar on The Value of Joining IEEE and its Membership Benefits	Mr.M.Sai Prashanth Section Student Representative IEEE – Hyderabad Section	IEEE	16-11-2022	50

Collaborative learning:

- Students acquire knowledge on various skills such as technical skills, communication skills, etc by organizing and participating in professional activities.
- Students also learn new technology during their project implementation.

MOOCs Courses:

The students are encouraged to do the certification courses in NPTEL, Coursera, Udemy and other MOOC Courses. This course enables them to enrich their subject knowledge, give an exposure to recent technological advancements and also serves as a platform to strengthen their interdisciplinary skills. It is also considered as a key for lifelong learning. The faculty members are also using E-sources such as Swayam NPTEL courses for effective teaching.

Table 2.2.1c: Details of MOOC courses

S.No	**No. of students completed**	**MOOC platforms**
2022-23		
1	332	Spoken Tutorial
2021-22		
2	65	CISCO
2020-21		

3	229	CISCO, NASSCOM

Technical Training Programmes through Training & Placement Cell:

- Technical training refreshes the basics which will be helpful for placement activities
- Specially designed training (soft skills, communication skills) is given to students regularly by the Training & Placement cell
- Such activities facilitate the students to win in job recruitment /placement.
- Table 2.2.1d shows the list of training programmes conducted with the resource persons from different industries

List of industrial trainings conducted for students by T&P is given below:

Table 2.2.1d: List of industrial trainings for A.Y 2022-2023

S.no	Name of the program	Date	Organized by	Beneficiary
1	DXC TRAINING	26-06-2022 to 13-07-2022	Inhouse	19KQ-BATCH
2	TCS TRAINING	14-07-2022 to 13-08-2022	Inhouse	19KQ-BATCH
3	BRILLIO & TECH MAHINDRA TRAINING	10-09-2022 to 21-09-2022	Inhouse	19KQ-BATCH
4	DELTA X & ZESSTA TRAINING	01-10-2022 to 09-10-2022	Inhouse	19KQ-BATCH
5	CRMIT & SNOVASYS TRAINING	12-10-2022 to 25-10-2022	Inhouse	19KQ-BATCH
6	PLINTRON TRAINING	06-12-2022 to 10-12-2022	Inhouse	19KQ-BATCH
7	deloitte TRAINING	12-12-2022 to 28-12-2022	Inhouse	19KQ-BATCH
8	OSI DIGITAL & THRMO FISHER TRAINING	31-12-2022 to 06-01-2023	Inhouse	19KQ-BATCH
9	[24].7 ai	06-02-2023 TO 11-02-2023	Inhouse	19KQ-BATCH
10	TOLL PLUS	17-02-2023 TO 22-02-2023	Inhouse	19KQ-BATCH

Table 2.2.1e: List of industrial trainings for A.Y 2021-2022

S.no	Name of the program	Date	Organized by	Beneficiary
1	TCS & WIPRO TRAINING	06-10-2021 to 19-10-2021	Inhouse	18KQ-BATCH
2	MINDTREE TRAINING	21-10-2021 to 30-10-2021	Inhouse	18KQ-BATCH
3	QUEST GLOBAL TRAINING	01-11-2021 to 16-11-2021	Inhouse	18KQ-BATCH
4	HCL TRAINING	17-11-2021 to 16-12-2021	Inhouse	18KQ-BATCH
5	INFYTQ& HACK WITH INFY TRAINING	06-12-2021 to 07-01-2022	Inhouse	19KQ-BATCH
6	HEXAWARE TRAINING	21-04-2022 to 02-05-2022	Inhouse	19KQ-BATCH
7	EUNIMART TRAINING	04-05-2022 to 16-05-2022	Inhouse	19KQ-BATCH
8	IBI GROUP TRAINING	17-05-2022 to 19-05-2022	Inhouse	19KQ-BATCH

Table 2.2.1f: List of industrial trainings for A.Y 2020-2021

S.no	Name of the program	Date	Organized by	Beneficiary
1	T CS NQT TRAINING	01-10-2020 to 20-10-2020	Inhouse	17KQ-BATCH
2	HEXAWARE TRAINING	01-11-2020 to 10-11-2020	Inhouse	17KQ-BATCH
3	APTROID TRAINING	15-11-2020 to 20-11-2020	Inhouse	17KQ-BATCH
4	TEK SYSTEMS TRAINING	01-12-2020 to 10-12-2020	Inhouse	17KQ-BATCH
5	WIPRO TRAINING	18-12-2020 to 28-01-2021	Inhouse	17KQ-BATCH
6	GLOBAL EDGE TRAINING	15-02-2021 to 19-02-2021	Inhouse	17KQ-BATCH
7	INFYTQ TRAINING	10-02-2021 to 17-04-2021	Inhouse	18KQ-BATCH
8	MPHASIS TRAINING	01-07-2021 to 10-07-2021	Inhouse	18KQ-BATCH

Table 2.2.1g: List of industrial trainings for A.Y 2019-2020

S.no	Name of the program	Date	Organized by	Beneficiary
1	EMBEDDED UR TRAINING	01-07-2019 to 08-07-2019	Inhouse	16KQ-BATCH
2	TCS TRAINING	22-07-2019 to 02-08-2019	Inhouse	16KQ-BATCH
3	MIND TREE TRAINING	06-09-2019 to 11-09-2019	Inhouse	16KQ-BATCH
4	WIPRO COMPANY SPECIFIC TRAINING	11-10-2019 to 17-10-2019	Inhouse	16KQ-BATCH

5	CTS SPECIFIC TRAINING	13-11-2019 to 22-11-2019	Inhouse	16KQ-BATCH
6	INFYTQ TRAINING	27-01-2020 to 10-02-2020	Inhouse	17KQ-BATCH
7	INFYTQ TRAINING	13-02-2020 to 24-02-2020	Inhouse	17KQ-BATCH

C. METHODOLOGIES TO SUPPORT WEAK STUDENTS AND ENCOURAGE BRIGHT STUDENTS

The department has a well-defined process of monitoring, guiding and assisting weak students. The students who secure below 50% marks in any subject in their I-Mid-Term examination are identified and considered as academically weak students. Students who secure above 80% marks in their I-Mid-term examination in all subjects are considered as academically bright students. Weak students are given counselling for the career guidance. Bright students are encouraged to take up new challenges, like participating in events like quiz, paper presentation, mini projects and technical fests, placement training.

Mentoring:

- The purpose of mentoring system is to monitor the student with regard to their academic and professional well-being.
- Every mentor regularly monitors the internal and external marks obtained by students and guide them for improvement in case of poor performance.
- Mentors also identify the core competencies of the students and guide them to make a better professional.
- Students are allowed to approach the mentor for both academic & personal problems.

Assistance for weak students:

- Mentors regularly follow their progress and counsel them to attend the classes regularly
- Motivated the weak students to attend remedial classes and help them to better understand the subject
- Students' attendance and performances are intimated to parents.
- Counselling is given to the students by subject handling faculty, Class teacher and HOD if necessary
- Discussion on important questions and question bank is arranged
- Remedial classes are conducted for weak students to improve knowledge.

Support for average students:

- Encourage students to attempt MOOCs and other certification courses
- Assigning seminar presentations to improve their presentation skills etc.
- Motivate them to workshops, seminars, paper presentations and other co-curricular activities

Encouraging bright students:

- To take up mini/major projects to enrich them technically skilled
- Motivate them to attend conferences, project expos and other co-curricular activities
- Encourage students to attend competitive examinations, like GATE, CAT etc.
- Involve bright students for peer tutoring the weak students.

The following flow chart is used to support weak students and encourage bright students

Figure 2.2.1g: The process used for encouraging bright students and assisting weak students

D.QUALITY OF CLASSROOM TEACHING

In the teaching-learning process, the lectures are delivered by the faculty member through a set of teaching aids and adopting various teaching methods.

Course Plan:

In the teaching learning process, the course plan plays a vital role. It is prepared by each faculty member handling their respective courses two weeks prior to the commencement of every semester. The course plan for each of the course is scrutinized by the PAQIC under the guidance of the Head of the Department.

All faculty members maintain the attendance diary and evaluation book for the course that they handle. The course plan contains the following details.

- Course plan includes course outcomes, teaching aids, teaching methods, learning outcomes, and mapping of outcomes and learning resources that can be effectively utilized for the best delivery.
- Based on the course plan, the delivery is recorded accordingly in the attendance diary and evaluation book and reviewed by the Head of the Department.
- The teaching-learning process is evaluated based on the data recorded in the attendance diary and evaluation book.
    - Institute Vision & Mission
    - Department Vision & Mission
    - Syllabus
    - Timetable
    - Topics to be taught beyond the syllabus.
    - Course outcomes with learning outcomes
    - Learning Resources developed
    - Course delivery details and record of class work
    - Course information Sheet
    - Record of the attendance.
    - Analyse the performance of students in CIE tests.

Every faculty in the department is strictly follows the plan and procedure to ensure the quality of teaching in the class room.

E. CONDUCT OF EXPERIMENTS (OBSERVATION IN LAB)

Student's carryout extra experiments beyond the specified list. Detailed instruction manuals are provided to the students. The observations are checked and verified by faculty and record books are maintained systematically. Two/Three faculty members and one Lab technician are assigned for each practical session. Latest standard software helps to teach the students to analyse the data as per the industrial standards and Virtual lab experiments are also conducted in Semiconductor Devices and Circuits, Analog Communication and Digital Communication and other labs as part of online classes during COVID-19 pandemic.

F. CONTINUOUS ASSESSMENT IN LABORATORY

Continuous assessment system is also implemented for assessment of laboratory work. Students are instructed to maintain individual Laboratory assessment records. These records are checked and verified by faculty member before the commencement of each experiment. Viva voce is conducted for the students in order to test their knowledge in the experiment. The internal assessment marks are allotted based on Rubrics and the average marks is considered for awarding final internal assessment work.

Table 2.2.1h Allocation of internal laboratory marks for R18 regulation

S. No	Internal	Marks	External	Marks
1	Internal Lab Examination	10	External Lab Exam	60
2	Record	05		
3	Day to day performance	20		
4	Viva-Voce	05		
	Total Marks	40		

G. STUDENT'S FEEDBACK OF TEACHING LEARNING PROCESS AND ACTION TAKEN

To improve the teaching learning process the feedback from the student is obtained every semester for every course. Common feedback system is designed at the institutional level for all the years by considering all the dimensions of the teaching-learning process. The feedback is collected online portal in middle of the every semester in all courses. Feedback is analysed by senior Professors along with the Head of the Department. After analysis, all comments written by the students in the feedback forms will be communicated to the respective faculty members along with their feedback level. Thereby teacher can know their strengths, weaknesses and improve their teaching skills accordingly.

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INTERNAL QUALITY ASSURANCE CELL(IQAC)

Department of Electronics and Communication Engineering

Feedback of students on faculty (Theory course faculty)

A.Y: 2021-22 **Year & Sem:** **Branch& Sec:**

IQAC conducts and records students' feedback on faculty to monitor the performance and interest in academic and other activities. So, rate the below questionnaires to the best of your knowledge.

Rate 0-4:

4 (Very Good)	3(Good)	2 (Average)	1(Poor)	0 (Very Poor)

Sl. No	Particulars	Course-1	Course- 2	Course- 3	Course-4	Course-5
	Course name					
1.	Syllabus of the subject					
2.	Subject knowledge of the faculty					
3.	Time sense of the faculty (class punctuality, syllabus coverage....etc)					
4.	Communication skills of the faculty (in terms of articulation and comprehensibility)					
5.	Accessibility of the faculty in and out of the class (includes availability of the teacher to motivate further study and discussion outside class)					
6.	Usage of ICT tools by faculty (Projectors, Online tools .... etc)					
7.	Class controlling by the faculty					
8.	Any other remarks					

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INTERNAL QUALITY ASSURANCE CELL(IQAC)

Department name

Feedback on faculty by students (Lab course faculty)

A.Y: 2021-22 **Year & Sem:** **Branch & Sec:**

Phase:

Rate 0-4:

4 (Very Good)	3(Good)	2 (Average)	1(Poor)	0 (Very Poor)

Sl. No	Particulars	Lab -1	Lab - 2	Lab - 3
	Lab name			
1.	Lab experiments/ programs relation to real world			
2.	Knowledge of the faculty on the lab experiments/ programs			
3.	Helping students in conducting experiments/ programs			
4.	Takes interests in conduct of labs with viva, virtual labs, group discussions etc....			
5.	Regular checking of lab observations and records			
6.	Any other remarks			

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INTERNAL QUALITY ASSURANCE CELL(IQAC)

Feedback of students on Department/ Institution

A.Y: 2021-22 **Year & Sem:** **Branch & Sec:**

Phase:

Rate 0-4:

4 (Very Good)	3(Good)	2 (Average)	1(Poor)	0 (Very Poor)

Sl. No	Particulars	Rating
1.	Ambiance/ facilities in the department/ college	
2.	Conduction of co-curricular and extracurricular activities in department/college	
3.	Maintenance of discipline in department/college	
4.	Communication about activities and scholarships	
5.	Any other remarks	

Figure 2.2.1j: Feedback format used for the faculty on teaching & learning
Actions taken:

- Based on the feedback reports the faculty will be counselled by the HOD, who have secured low scores and negative comments. This motivates them to improve their skills and abilities.
- In some cases, the faculties having less feedback are recommended to attend FDPs on Pedagogical training and technical knowledge.
- If required training / orientation programs are conducted by professional experts to master the skills of the faculty members
- In some exceptional conditions **/** based on the instructions given by the HOD and request of the concerned faculty, senior Professors taught some concepts.
- The feedback is also considered as one of the component in annual increment process.

2.2.2 Quality of end semester examination, internal semester question papers, assignments and evaluation (15) Institute

A. PROCESS FOR INTERNAL SEMESTER QUESTION PAPER SETTING AND EVALUATION AND EFFECTIVE PROCESS IMPLEMENTATION

Initiatives:

The examination process / Setting of quality question papers aims to measure the intellectual skills accomplished by the students as per Revised Bloom's Taxonomy levels

- Remembering
- Understanding
- Applying
- Analyzing
- Evaluating
- Creating

Assessing the performance of students over a well-distributed interval of time within the semester through continues evaluation.

Implementation Details:

Internal Examinations

- The internal examination question papers are prepared by the faculty involved in delivering the course for all sections
- Question papers are prepared in a manner to cover all the COs of that particular course and Revised Bloom's Taxonomy will also be followed in question paper setting.
- The college conducts five assignment tests,five class room tests and two sessional tests in a semester for all courses: one at the middle and the other at the end of semester for theory courses as per the R-18 regulation.
- After completion of tests, the evaluated answer scripts are distributed to the students and an opportunity is given to the students to verify and the changes are rectified before the marks statement is finalized.

Semester End Examinations

- For each course of the program, semester end examination is conducted.
- The Controller/Coordinator of Examinations identifies the panel of question paper setters from premier institutes like NITs, State Universities, and Autonomous Colleges.
- The question papers are also scrutinized by the subject expert to ensure all questions were set from course syllabus and to identify insufficient data or typographical mistakes, if any in the question paper.

Evaluation:

As per the R-18 regulations, each theory course is evaluated for 100 marks, distributed into 40 marks for internal assessment and 60 marks for semester end examination.

Internal Examinations

- Every theory course consists of 5 units and for each course the internal assessment is done for 40 marks.
- The internal evaluation is based on two cycle tests conducted in each semester. The 40 internal marks are awarded as sum of 80**%** of the best cycle and **20%** of the least cycle examinations, where each cycle of examination contains the distribution as shown in Table 2.2.2a.

Table 2.2.2a: Distribution of internal Marks for theory course

S.No	**Type of examination**	**Max Marks**
1	Descriptive test	20
2	Objective test	10
3	Assignment test and CRT	10
Total Marks		**40**

- Each descriptive test question paper contains 4 questions one from each unit covering syllabus from 2.5 units (first 2.5 units for first cycle and remaining 2.5 units for second cycle). The student has to answer all the 4 questions (4X5M=2**0M**). . The descriptive examination is conducted for 2 hour duration.
- Online Objective type test question paper contains 20 objective questions for 10 marks (20 X 1/2 M = 10M) covering the syllabus from 2.5 units. The Objective Examination is conducted for 20 minutes duration along with descriptive test.

The evaluation for laboratory class work consists of,

Table 2.2.2a: Distribution of internal Marks for laboratory course

Parameter	**Marks**
Day-to-Day work	20
Internal test	10
Record	05
Viva-Voce	05
Total	**40**

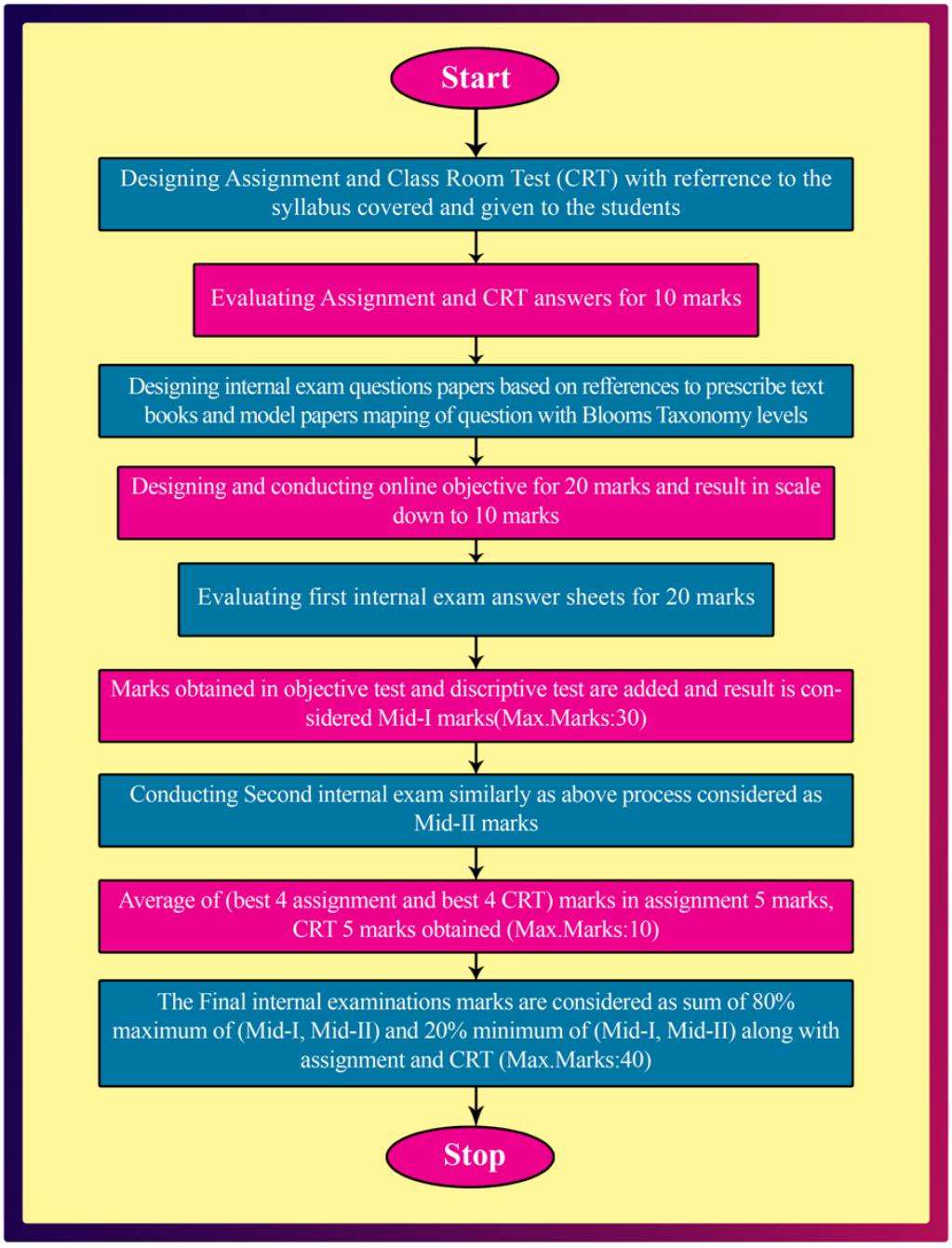

Figure 2.2.2a: Process of internal evaluation systems

Semester End Examinations

- The valuation of answer booklets of the semester end examination is done by conducting the spot valuation by inviting the valuators from nearby autonomous institutions
- For each course, a detailed key (solutions cum scheme of valuation) is prepared by one of the internal faculties, who has taught the subject in the current semester
- In order to get uniformity in the valuation process, the normalization system is adopted
- According to this system:
    - All the valuators sit together to discuss and finalize a common scheme of valuation at the beginning of the assessment
    - The Chief examiner picks one answer script, randomly for every 10 answer scripts and valuate the script
    - The Chief examiner compares valuated marks with previous allotted marks and finalize the marks based on the probable deviation.
    - If marks deviation exceeds then the Chief examiner advices the valuator to re-valuate the scripts.
    - Revaluation of answer scripts is available, based on the students request.

B. PROCESS TO ENSURE QUESTIONS FROM OUTCOMES/LEARNING LEVELS PERSPECTIVE

- For all UG courses, internal question papers are scrutinized by the Pre-Exam Committee (PEC). The committee will verify whether the question papers which are prepared by the concerned faculty members according to the blooms taxonomy (BT) and course outcomes (COs). The committee will also give their suggestions and directions to ensure quality of question papers and evaluation scheme. The PEC approves the question papers in respect of Continuous Internal Evaluation tests. Students who answered a particular question is taken into consideration and average of all students marks is taken for CO-PO attainment.
- The Pre-Exam Committee (PEC) is formed with HOD and Senior faculty members of the department.
- The Committee ensures the quality of internal question papers, based on the course outcomes with proper blooms taxonomy levels.

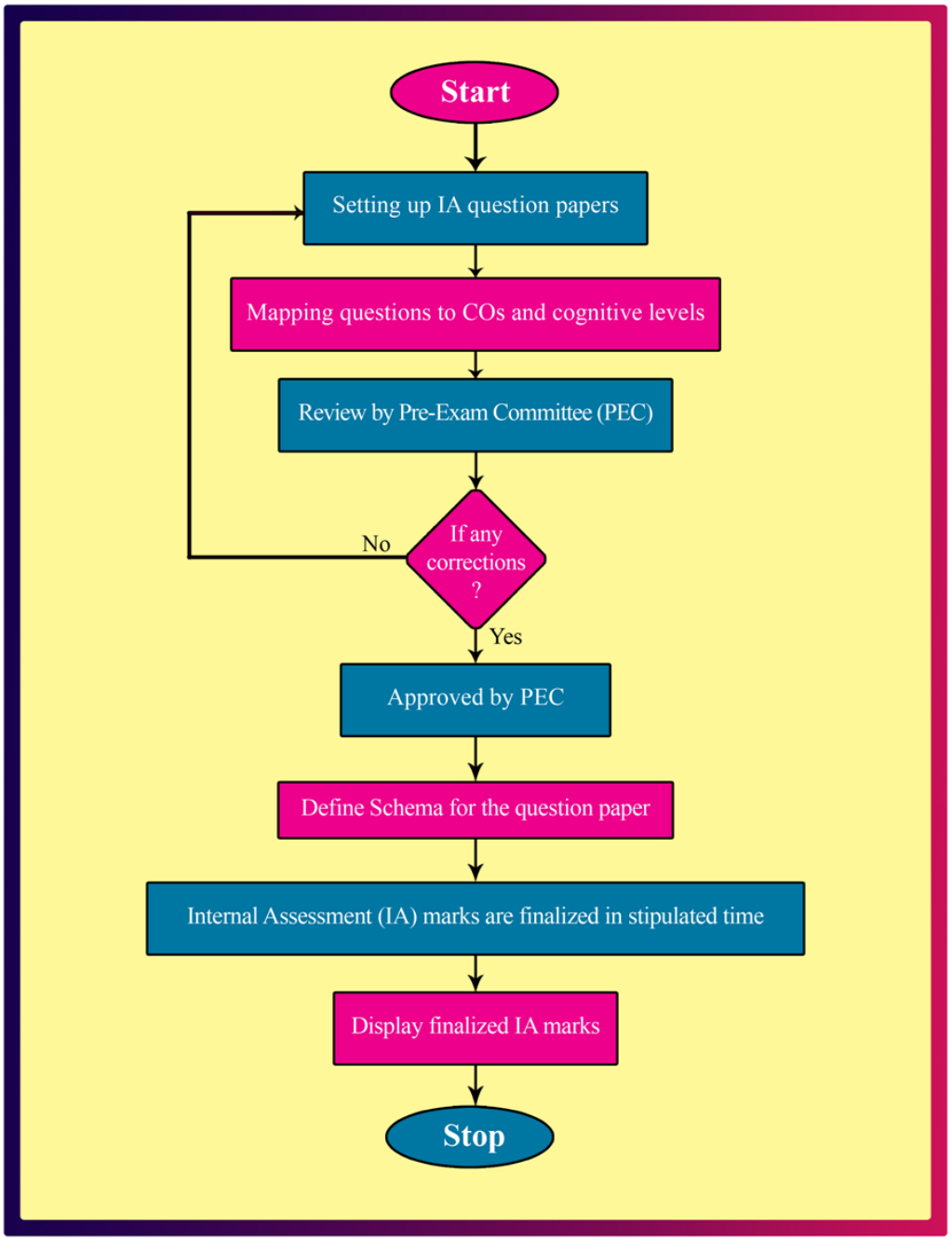

Figure 2.2.2b: Flow chart of process for internal examination question paper setting and evaluation

C. Evidence of COs coverage in mid-term tests

- The faculty members of concerned courses are instructed to give question papers with proper mapping of COs and Blooms taxonomy levels.
- The Sample Mid Exam Question paper is given below.

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IV B.Tech II Semester – Subjective Examination-I

CELLULAR AND MOBILE COMMUNICATIONS

(ECE)

Subject Code:P18ECE14 Academic

Year: 2022-23 R18 Regulation

Time: 2 hours Date of Exam: 31/01/23 Max Marks: 20

Answer all the Questions. All Questions carry equal marks. *4X5=20 Max Marks*

Q.No		Questions	Marks	BL	CO
1	(a)	List the main features of 4G cellular systems	3 M	L4	1
	(b)	Write brief note on evolution of cellular systems	2 M	L1	1
2		What is non-co channel interference? Explain the various types of non-co channel interference?	5 M	L1 &L2	2
3		Explain antenna parameters and their effects	5 M	L2	2
4		What are the various channel assignment strategies with respect to mobile units? Explain in detail	5 M	L1& L2	3

Figure 2.2.2d: Mid Examination Question Pape

D. Quality of Assignment/Class Room Test and its relevance to COs

- To conduct Assignment Tests, the faculty members of concerned courses will distribute 4 questions in the class room at least one week in advance. In the test, 4 question will be given to each student and the student has to answer it. Each question in the assignment will be mapped with CO and blooms taxonomy level.
- The feedback is given to the students after evaluation and answer scripts were given to the students for the verification. It impacts the students to improve their performance in further examinations.
- The Sample Assignment Questions are given below.

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Assignment Questions

AY : 2022 – 23 **Dt: 02/11/2022**

Name of the subject : ERTOS(P18ECE01) **Branch: ECE** **Year / sem : IV / I**

UNIT - I

Q.No	Questions	Marks	BL	CO
1	Explain the different classifications of Embedded Systems. Give an example for each	1M	L2	1
2	Explain about application specific embedded system with suitable example	1M	L2	1
3	What is operational quality attributes? Explain the important operational quality attributes to be considered in any embedded system design	1M	L1 & L2	1
4	Explain Sensors & Actuators.	1M	L2	1

UNIT - II

Q.No	Questions	Marks	BL	CO
1	Discuss about Real time clock and watch dog timer with respect to an Embedded Hardware?[	1M	L6	2
2	Explain various serial communication devices used in an Embedded Hardware	1M	L2	2
3	Explain Parallel device ports	1M	L2	2
4	Explain wireless devices.	1M	L2	2

UNIT - III

Q.No	Questions	Marks	BL	CO
1	What are the Embedded Firmware Development Languages and Explain it.	1M	L1 & L2	3
2	Explain ISR concept.	1M	L2	3
3	Compare C and Embedded C.	1M	L4	3
4	Explain Embedded Firmware Design Approaches.	1M	L2	3

UNIT - IV

Q.No	Questions	Marks	BL	CO
1	List the types of Operating Systems and Explain it.	1M	L4 & L2	4
2	Define Operating System and Explain Process & Threads.	1M	L1 & L2	4
3	Explain Task Synchronization.	1M	L2	4
4	Compare multiprocessing & multitasking	1M	L4	4

UNIT - V

Q.No	Questions	Marks	BL	CO
1	What are the Fundamental Issues in Hardware Software CoDesign and Explain it.	1M	L1 & L2	5
2	What are the Applications of Hardware Software CoDesign.	1M	L1	5
3	Explain Communication Models in Embedded Design.	1M	L2	5
4	Explain Integration of Hardware and Firmware.	1M	L2	5

Fig 2.2.2e: Assignment Test Question Paper

- To conduct Class Room Tests, the faculty members of concerned courses will distribute 4 questions in the class room at least one week in advance. In the test, 2 question will be given to each student and the student has to answer it. Each question in the assignment will be mapped with CO and blooms taxonomy level.
- The feedback is given to the students after evaluation and answer scripts were given to the students for the verification. It impacts the students to improve their performance in further examinations.
- The Sample Class Room Test Questions are given below.

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Class Room Test Questions

AY : 2022 – 23 **Dt: 02/11/2022**

Name of the subject :ERTOS & P18ECE01 **Branch: ECE** **Year / sem : IV / I**

UNIT - I

Q.No.	Questions	Marks	BL	CO
1	Explain External Communication Interfaces.	5M	L2	1
2	Explain briefly about memory in embedded system	5M	L2	1
3	Explain Sensors with examples.	5M	L2	1
4	Explain briefly about Actuators in embedded system.	5M	L2	1

UNIT - II

Q.No.	Questions	Marks	BL	CO
1	Explain timer & counting devices in embedded systems.	5M	L2	2
2	Explain I/O types with examples.	5M	L2	2
3	Discuss about Real time clock and watch dog timer with respect to an Embedded Hardware?	5M	L4	2
4	Explain Parallel device ports in embedded systems.	5M	L2	2

UNIT - III

Q.No.	Questions	Marks	BL	CO
1	Compare Compiler Vs Cross Compiler.	5M	L4	3
2	Explain briefly about DMA.	5M	L2	3
3	Compare C and Embedded C	5M	L4	3
4	Explain ISR concept in embedded systems	5M	L2	3

UNIT - IV

Q.No.	Questions	Marks	BL	CO
1	Explain Process and Scheduling.	5M	L2	4
2	Explain Task Communication with example.	5M	L2	4
3	Define Operating System and Explain Process & Threads.	5M	L2	4
4	Explain Task Synchronization in embedded systems	5M	L2	4

UNIT - V

Q.No.	Questions	Marks	BL	CO
1	What are the Advantages & Disadvantages of Hardware Software Co-Design.	5M	L1	5
2	Explain Hardware Software Trade-offs.	5M	L2	5
3	What are the Applications of Hardware Software CoDesign.	5M	L1	5
4	Explain Communication Models in Embedded Design.	5M	L2	5

Fig 2.2.2f: Class Room Test Question Paper

Impact Analysis

- The Pre-Exam Committee of the department analyzes the quality of question papers.
- The above process ensures that question papers are framed by considering all COs into account.
- Question papers are framed as per Bloom's taxonomy levels.
- The desired COs, POs and PSOs of each course are attained through adopting the above stated quality initiatives in question paper settings and assignments.

2.2.3 Quality of student projects (20)

Institute

The department follows standard procedures to ensure that students should carry out a quality project and the major project work is carried out by the students in VIII Semester and Mini project in VI Semester inR18 regulations. Students are encouraged to do project work on real world examples.

A. IDENTIFICATION OF PROJECTS AND ALLOCATION METHODOLOGY TO FACULTY MEMBERS

Project Group formation:

- The students are categorised into batches based on their performance in the previous examinations
- Each team or project batch consists of 4-5 students.
- Project batches are formed such that each batch has students with varying academic merit

Identification of the Guide:

- Each batch selects their guide according to their area of interest and the research area and competency of the faculty members.
- Project identification is done based on student's innovative ideas in consultation with supervisor
- The lists of previous year projects are available to the students in the department library and central library to ensure no repetition of project work in selecting the present project work
- The students take guidance from their guides while finalizing the problem

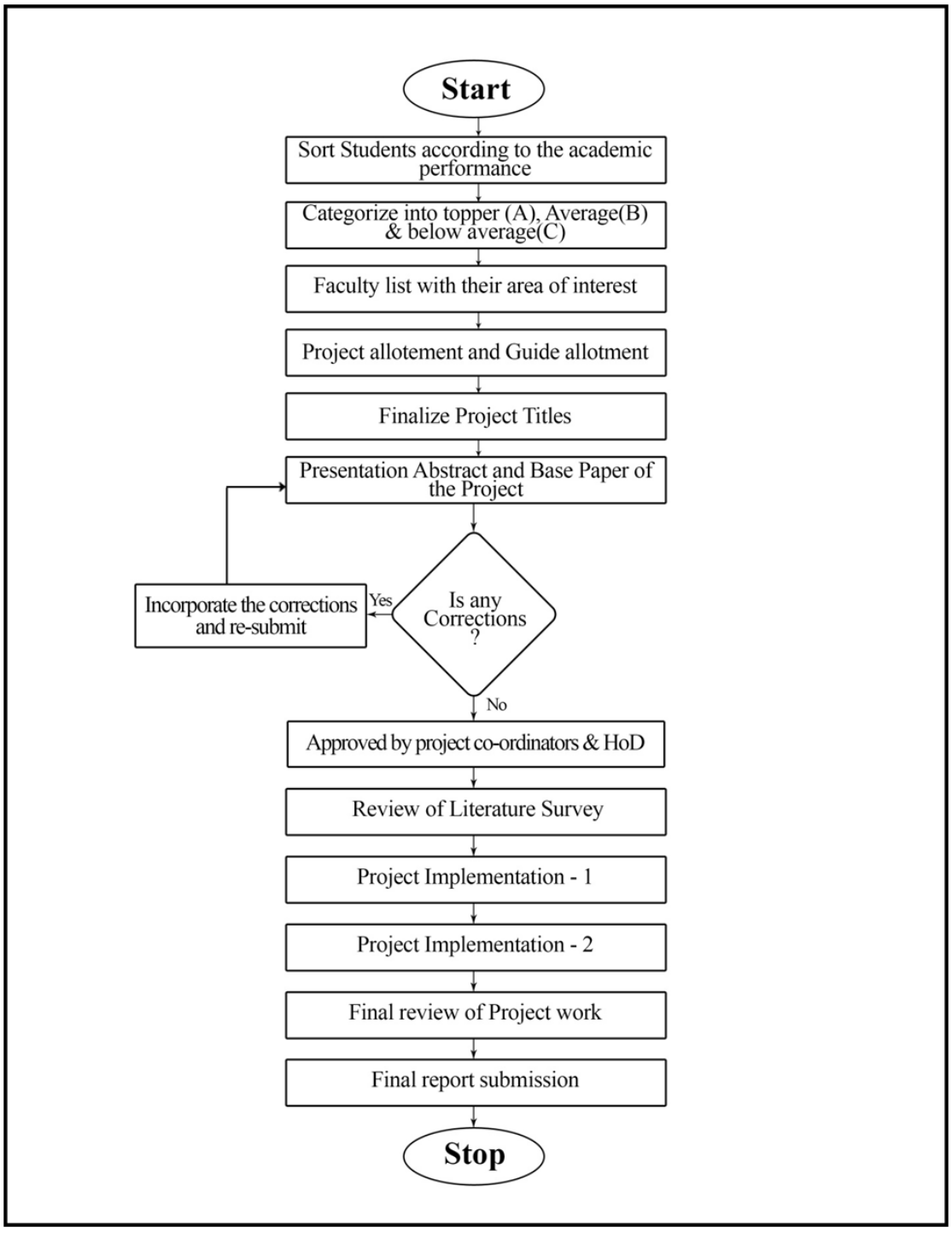

Figure2.2.3a: The process used for project group formation, Guide allocation and Project Completion

B. TYPES AND RELEVANCE OF THE PROJECTS AND THEIR CONTRIBUTION TOWARDS ATTAINMENT OF POs AND PSOs

Table 2.2.3a: List of various categories of student projects and their relevance with POs and PSOs

A. Y	Broad area of the project	No. of projects	Mapping POs	Mapping PSOs

2021-22	VLSI Technology	6	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO9, PO10,PO11,PO12	PSO1,PSO 2
	Digital Signal and Image Processing	4	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO9, PO10,PO11,PO12	PSO1,PSO 2
	Embedded Systems	1	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO9, PO10,PO11,PO12	PSO1,PSO 2
	IoT	13	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO9, PO10,PO11,PO12	PSO1,PSO 2
	Antenna Design	6	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO9, PO10,PO11,PO12	PSO2
	Machine Learning	2	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO9, PO10,PO11,PO12	PSO2
	MEMS	8	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO9, PO10,PO11,PO12	PSO1,PSO 2
	Wireless Communications	6	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO9, PO10,PO11,PO12	PSO1,PSO 2
2020-21	VLSI Technology	5	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO9, PO10,PO11,PO12	PSO1,PSO 2
	Digital Signal and Image Processing	6	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO9, PO10,PO11,PO12	PSO1,PSO 2
	Embedded Systems	7	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO9, PO10,PO11,PO12	PSO1,PSO 2
	IoT	10	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO9, PO10,PO11,PO12	PSO1,PSO 2
	Antenna Design	8	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO9, PO10,PO11,PO12	PSO2
	Machine learning	4	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO9, PO10,PO11,PO12	PSO1,PSO 2
	Wireless Communications	4	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO9, PO10,PO11,PO12	PSO1,PSO 2
	Wireless Sensor Networks,MEMS	2	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO9, PO10,PO11,PO12	PSO1,PSO 2
2019-20	VLSI Technology	3	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO9, PO10,PO11,PO12	PSO1,PSO 2
	Antenna Design	4	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO9, PO10,PO11,PO12	PSO2
	Wireless Sensor Networks	1	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO9, PO10,PO11,PO12	PSO1,PSO 2
	Digital Signal and Image Processing	16	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO9, PO10,PO11,PO12	PSO1,PSO 2
	Embedded Systems	17	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO9, PO10,PO11,PO12	PSO1,PSO 2
	IoT	6	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO9, PO10,PO11,PO12	PSO1,PSO 2

C. PROJECT RELATED TO INDUSTRY

The students are allowed to do the project in the industry, based on the opportunity got from industry.

Table 2.2.3b: Details of industry related projects

S.No.	Name of the Student	Name of the project	Date(s)	Organization
1	B.varun Kumar J.Bhavan E.Anil Kumar Sk.Nafrin	Virtual Telepresence Robot Using Raspberry Pi	01-02-2019 to 15-03-2020	Micro Small & Medium Enterprises, Hyderabad
2	K.Pawan Kalyan B.Gopi M.Iswarya Devi B.V.Teja	Avoiding Fake Voting And Easy Polling By Using Arduino	01-02-2019 to 15-03-2020	Micro Small & Medium Enterprises, Hyderabad

D. PROCESS FOR MONITORING AND EVALUATION

According to R-18 Regulations:

- Major project is evaluated for total of 200 marks. Out of 200 marks for the project work, 80 marks are for Internal Evaluation consisting of day-to-day work, reviews, the assessment of the project report and 120 marks for the external evaluation.
- Mini Project is evaluated for total of 100 marks. Out of 100 marks, 10 Mini project report, 10 marks for innovation, 10 marks for presentation and 10 marks for Viva voce and 60 marks for the external evaluation.

Internal Evaluation

- The department forms Project Review Committee (PRC) every year and it consists of Head of the department as Chair, senior faculty members and project coordinator as members.
- A project coordinator is appointed by the Head of the Department who is responsible for planning, scheduling and execution of all activities related to the project.
- The project coordinator instructs the students to select the project domain and submit the synopsis to concern guide adhering to the timelines decided by the HOD.
- Department encourages the students to carry out in-house projects and required support is provided through continuous hands-on trainings by internal as well as external experts.
- The students are asked to meet their respective guides regularly and asked to explain the progress in their project.
- Project reviews are conducted regularly by the PRC of the department in the presence of respective guide to check the status of the projects and time to time assessment is done for all the projects.
- Project teams have to submit the project report in the prescribed format given by the institution.

The Reviews of projects is done as follows:

The performance of a student in a project survey shall be evaluated based on the following parameters:

Parameter	Marks
Literature Review	15
Presentation	15
Viva Voce	10
Total	**40**

Two Project Implementation Reviews are evaluated based on the following parameters:

Parameter	Marks
Contribution	10
Innovation	10
Presentation	10
Viva Voce	10
Total	**40**

External evaluation

- An end semester project, viva voce is conducted with the panel of internal and external examiners. The external examiner from other institution is appointed by the Controller of Examinations.

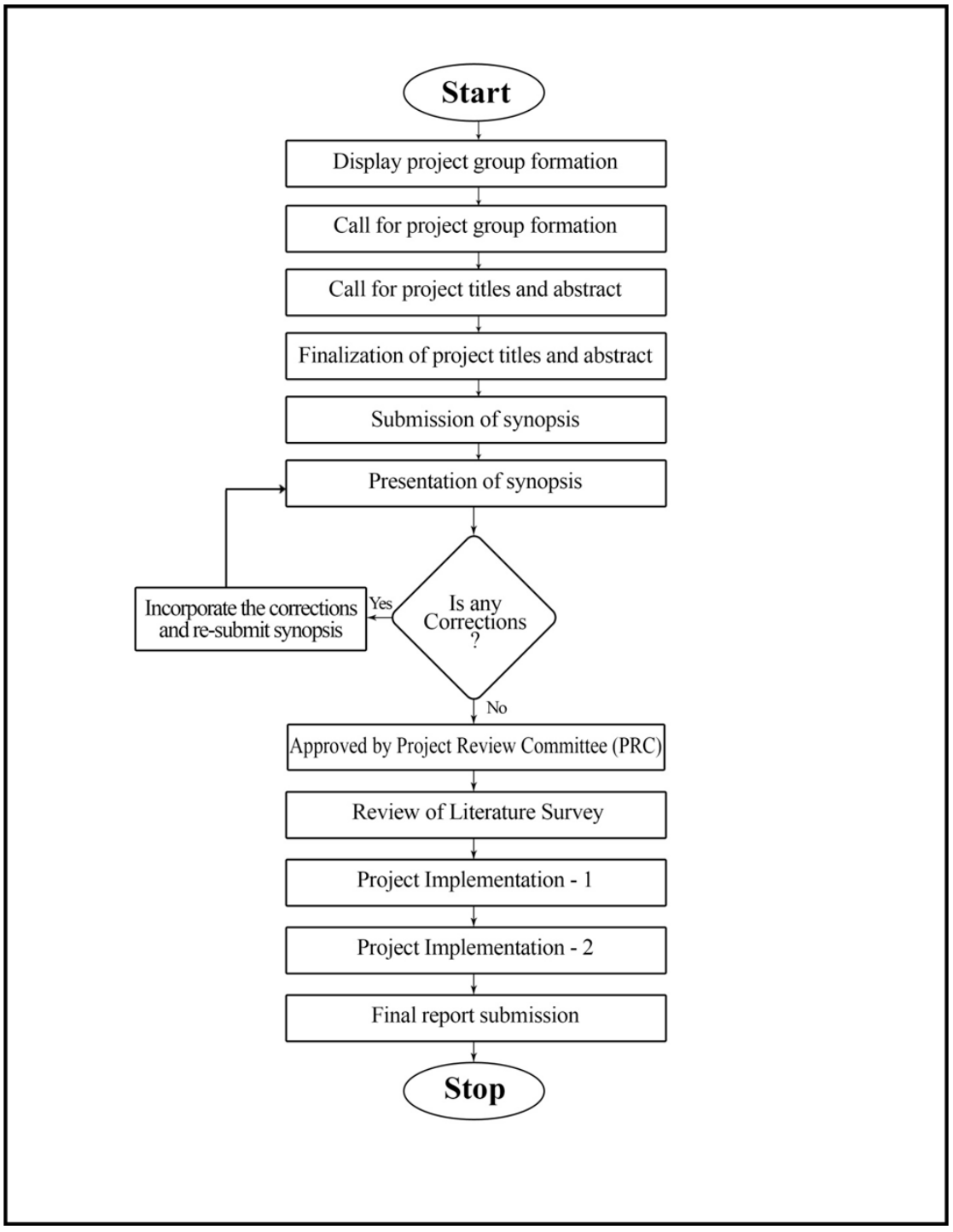

Figure 2.2.3b: Process for defining the student projects approval and evaluation

E. PROCESS TO ASSESS INDIVIDUAL AND TEAM PERFORMANCE

Project reviews are conducted by PRC along with respective guide as per the schedule and presentation should be given by all team members according to their division of project work. The performance of the individual and team of the project is assessed at the time of presentation in reviews by considering the following criteria.

The performance of the individuals assessed by considering the following criteria:

- Communication
- Confidence in the project work
- Attainment of individual scope of work
- Overall contribution of the project accomplishment

The performance of the project team is assessed by considering the following criteria:

- Knowledge of the members contribution towards the project
- Coordination in consolidating the work
- Time management

F. QUALITY OF COMPLETED PROJECTS/ WORKING PROTOTYPES

Project Review Committee (PRC) ensures the quality of the student projects based on the following criteria.

- Review of literature and related studies
- Innovativeness and creativity
- Implementation strategies
- Presentation skills
- Impact on society

1. The students will demonstrate the working prototype models during the internal and external project reviews
2. Outcomes of the projects are encouraged to be published as a paper in conference / journals.
3. Students are encouraged to publish their project work in reputed journals/conferences.

Table 2.2.3f: Best projects of the students

2021-2022

S. No	Title of the project	Students	Area of the Project	Project Guide	PO	PS
1	Multilayed MIMO Antenna for 5G Applications	Battarusetti Akhila Shaik Afreen Bole Aravind Darla Harshith	Antennas	Dr. M. Rajasekhar	PO1, P02,PO3, PO4,PO5,PO6, PO7,PO8,PO9,P O10,PO11, PO12	P
2	Comparative analysis of linear & digitized thermal wave imaging methods	Eada Baavya Reddy Perugu Tulasi Karna Harikrishna Badithala Sai Karthik	Image Processing	Dr. Sk. Subhani	PO1, P02,PO3, PO4,PO5,PO6, PO7,PO8,PO9,P O10,PO11, PO12	P
3	Design of MEMS sensor for brain wave detection.	Tammisetty Vyshnavi Koppolu Padma Sai Tulasi Inkollu Ajay Kumar Ganta Sai Krishna	Digital Image Processing	Dr. M. Venkateswararao	PO1, P02,PO3, PO4,PO5,PO6, PO7,PO8,PO9,P O10,PO11, PO12	PS
4	skeleton-based action recognition using joint surface maps with convolutional networks	Myla Sri Lakshmi Konidala Sowmya Pappala Sukanya Maddela Bhanu Sai	Machine Learning	Dr. D. Anil Kumar	PO1, P02,PO3, PO4,PO5,PO6, PO7,PO8,PO9,P O10,PO11, PO12	P
5	VLSI design of Low power and Area Efficient 8 bit comparator using mux -6T based for communication system.	Katta Kavya Modiboyina Sai Tarun Kumar Vummiti Naga Prathyusha Vesapogu Amulya	VLSI	Dr. G. Erna	PO1, P02,PO3, PO4,PO5,PO6, PO7,PO8,PO9,P O10,PO11, PO12	P

2020-21

S. No	Title of the project	Students	Area of the Project	Project Guide	PO	P
1	Image Analysis For Mri Based Brain Tumor Detection Using Nature Inspired Algorithms	Kaliki Navya Guntha Ashok Kumar Reddy Pappu Sai Sowmya Thota Venkata Siva Kumar	Image Processing	Dr. M. Rajasekhar	PO1, P02,PO3, PO4,PO5,PO6, PO7,PO8,PO9,P O10,PO11, PO12	P
2	Geometric Feature Fusion For Skeleton Based Human Action Recognition Using Adaptive Kernel Matching	Peyyala Sirisha Boddu Nagamalleswari Kunchala Ashokbabu Pirla Alekhya	Machine Learning	Dr. D. Anil Kumar	PO1, P02,PO3, PO4,PO5,PO6, PO7,PO8,PO9,P O10,PO11, PO12	P
3	Mass Sensing Analysis Of Chemical Reaction Rate Using Mems Sensors	Nukathoti Kishorebabu Chimata Venkatesh Kondakamarla Mubarak Dasari Sobha Rani	MEMS	D. Naga Bhushan Babu	PO1, P02,PO3, PO4,PO5,PO6, PO7,PO8,PO9,P O10,PO11, PO12	P

4	Weather Monitoring System Using Thingspeak Cloud	Thota Sai Supriya Vesapogu Kalyan Vadapalli Venkata Sai Kartheek Patha Cuddaph Sandeep Kumar	IoT	G. Balanagireddy	PO1, P02,PO3, PO4,PO5,PO6, PO7,PO8,PO9,P O10,PO11, PO12	P

2019-20

S. No	Title of the project	Students	Area of the Project	Project Guide	PO	PS
1	Universal Object Detection using Deep learning in MATLAB	Kommalapati Chandana Gorantla Gayathri Oruganti Vasu Yarramala Akhil	Deep Learning	M.Bala Subrahmanyam	PO1, P02,PO3, PO4,PO5,PO6, PO7,PO8,PO9,P O10,PO11, PO12	P
2	Brain tumor segmentation using 2D & 3D views	Patibandla Glory Grace Kale Sai Vardhini BOJJA JAYA DEV Panditi Amalraj	Image Processing	Dr.J.V.Anand	PO1, P02,PO3, PO4,PO5,PO6, PO7,PO8,PO9,P O10,PO11, PO12	P
3	CNN based object recognition	Miriyam Tejaswini Vemula Modaka Lakshmi Samyuktha Shaik Maheef Vaka Lakshmi Kalyani	Deep Learning	Y.R.K.Paramahama	PO1, P02,PO3, PO4,PO5,PO6, PO7,PO8,PO9,P O10,PO11, PO12	P

G. EVIDENCE OF PAPERS PUBLISHED /AWARD RECEIVED BY PROJECT

- Students are encouraged to publish paper of their innovative project work in Conferences/journals
- Students are encouraged to attend the National or International Conferences to gain more ideas of their projects

Table 2.2.3g: Paper publications based on the project

2021-22

S.No	Name of the Student	Title of the Project	Name of the Journal/ Conference	Indexing Type	Date/ ISSN No
1	**Vesala G.T**	**Enhanced Subsurface Analysis Using Proper Orthogonal Decomposition in Nonstationary Thermal Wave Imaging**	**Russian Journal of Nondestructive Testing**	Scopus	**Nov-2021/ 1061-8309**

2020-21

S.No	Name of the Student	Title of the Project	Name of the Journal/ Conference	Indexing Type	Date/ ISSN No
1	Shylaja S.L	IoT based crop monitoring scheme using smart device with machine learning methodology	International Conference on Recent Advancements in Biomedical Engineering 2021, ICRABE 2021	Scopus	Feb-2021/ 10.1088/1742-6596/2027/1/012019
2	Babu K.R	Brain Tumor Segmentation of T1w MRI Images Based on Integrated Clustering Algorithm	6th International Conference on Recent Trends on Electronics, Information, Communication and Technology, RTEICT 2021	Scopus	March-2021/ 10.1109/RTEICT52294.2021.9573928

2019-20

S.No	Name of the Student	Title of the Project	Name of the Journal/ Conference	Indexing Type	Date/ ISSN No
1	Mythili G	Design and development of automatic health monitoring system	International Journal of Advanced Science and Technology	Scopus	Feb-2020/2005-4238

2	Prasanna M.L	High secure integrity dual checking system for content address memory ram	International Journal of Advanced Science and Technology	Scopus	Feb-2020/2005-4238
3	Khan P.M	Design of accurate and high precision novel fault tolerant FFT	International Journal of Advanced Science and Technology	Scopus	Feb-2020/ 2005-4238
S.No	**Name of the Student**	**Title of the Project**	**Name of the Journal/ Conference**	**Indexing Type**	**Date/ ISSN No**
1	Gade. Uma Sravanth	Design A 2d Array Address Based Fault Tolerant Memory	International Journal of Research	UGC	June-2019/ 2236-6124

H. IMPACT ANALYSIS

- Knowledge on various aspects of project management was developed.
- Increased confidence level of students.
- Students learn how to work in a group/team.
- New innovative ideas from students which may lead to new applications.
- Technical skills and communication skills of the students are improved.
- Implementation and deployment of the project for social benefits.
- Students will be able to learn importance of project documentation and presentation.
- Documentation and presentation skills of the students are improved.

2.2.4 Initiatives related to industry interaction (10) Institute

Industry interactions help the students to acquire the practical knowledge. So in order to improve the technical abilities, various industrial activities are carried out. To promote Industry-Institute Interaction, the following initiatives are being undertaken by the department:

INITIATIVES

- An expert from Industry is nominated as member in the Board of Studies who takes an active role in the Curriculum design.
- Campus Recruitment Training (CRT) programs organized by Training & Placement (T & P) cell
- Conduct of Technical Workshops jointly with Industries.
- Value added courses in collaboration with Industries.
- Invited lectures by Industrial Experts.
- Industry Sponsored Laboratories
- Industrial tours

IMPLEMENTATION DETAILS

Memorandum of Understanding with Industries:

The institution has MOUs with many industries to strengthen the relationships for mutual benefit by way of exchanging the expertise. MOUs are done with emphasize on Internship, Project Work for Students, Industrial Visits, Students specific Training and Faculty Development Programs.

Table 2.2.4a: List of Industries with which the Institute has entered into MOUs for the department of ECE

S. No.	Name and Address of Organization	Date of MoU	Period	Nature of MOU
1	National Small Industries Corporation Technical Services Centre(NSIC-TSC), Hyderabad - 500062	26/08/2022	1 years	Industrial Training & Visits, Internship Placements to students,
2	Edu Skills	25/05/2022	3 years	Skill Development (Internships)
3	Hexaware	10/03/2022	3 years	Placements
4	Bosch	20/01/2022	2 years	Training & Skill Development
5	Xplore Placement Club	05/08/2021	1 year	Students Assessment & Placements
6	Code Tantra	07/08/2019	1 year	Skill Development
7	APSSDC	24/07/2019	3 years	Training & Skill Development
8	Chinmaya Micro Technologies , Hyderabad - 500062	09/01/2019	5 years	Industrial Training, Internship, Industrial Visits, joint Research Projects/Proto Types, Employment to the students in the Industry and Consultancy
9	CISCO	14/10/2018	1 year	Cisco N/W Academy Certifications
10	Spoken Tutorials	28/08/2018	1 year	Certification MOOCS

A. INDUSTRY SUPPORTED LABORATORIES

The industry supported laboratories develop best learning process to understand industry's best practices for both students and faculties. The department has the following Industry supported laboratories

1. APSSDC Training:

APSSDC has been helping students and faculty to produce more employable and industry ready professionals. List of services have been providing by APSSDC:

- To make qualitative improvements in imparting technical skills by setting up or providing
- Infrastructure in college laboratories by adopting latest technologies in engineering streams to serve the needs of the industry.
- Skill-up graduation of faculty by imparting training.
- Update course curriculum to suit modern industrial practices.
- Promote Research & Development and innovation for existing industries.
- Promote industry
- Train students to improve employability
- Enhance reputation of technical institutions with improved academic ambience and state of the art facilities.

Table 2.2.4b: Training programs organized by APSSDC

S.No.	Name of the Programme	Organized by /Resource Person(s)	Date(s)	Targeted Participants
2021-22				
1	Workshop on PCB Design Collaborating with APSSDC	Mr.B.Suresh Kumar,Technical Skill Trainer. Miss. S.Tejasree, Technical Skill Trainer. Mr.M.Prapul Kumar, Technical Skill Trainer.	22-11-2021 to 27-11-2021	III B.Tech
2020-21				
1	Workshop on PCB Design Fundamentals	B.SURESH KUMAR,Technical skill trainer	22-11-2021 to 27-11-2021	III B.Tech
2	Workshop on PCB Hardware	B.SURESHKUMAR, Technical skill trainer.	04-01-2021 to 06-01-2021	III B.Tech
2019-20				
1	Workshop on IOT fundamentals	C. Srihari, Trainer/Developer, M. PrapulKumar, Trainer/Developer.	07-12-2019	II & III B.Tech

2	Workshop on Arduino	C. Srihari, Trainer/Developer, M. PrapulKumar, Trainer/Developer.	09-12-2019 TO 11-12-2019	II & III B.Tech

B. INDUSTRY INVOLVEMENT IN THE PROGRAM DESIGN AND CURRICULUM

The Industry involvement in the Program design and Curriculum is required to bridge the gap between industry and institute. By partial delivery of courses at the institution is also required to prepare the students for employment. The department is appointing industrial experts as members of Board of Studies to involve in designing the program. The list of invited industrial experts who were involved in design of curriculum and syllabi of the programme is listed below.

Table 2.2.4c: List of invited industrial experts involved in curriculum design

S.No	Name of the Expert	Designation	Organization
1	Mr. K.V.Siva Rama Brahmam	CEO	Jaaji Technologies, Ongole, A.P
2	Mr M.Teja Kiran Kumar	Director	Yantrisiksha Technologies, Guntur, A.P

C. INDUSTRY INVOLVEMENT IN PARTIAL DELIVERY OF ANY REGULAR COURSES FOR STUDENTS

Guest lectures by industrial experts are one of the best practices which help the student to know about recent trends in industries related to their courses. The effectiveness of course delivery by the industry expert is monitored for improvement in students knowledge on different latest technologies.

Table 2.2.4d: Invited lectures organized by the Department of ECE by Industry persons

2021-22:

S.No.	Date of Guest Lecture/ Seminar	Details of Resourse Person (Name, Designation, Company / Institute, Location)	Topic Covered in Guest Lecture/ Seminar	No of students attended the Guest Lecture
1	30-03-2022	Mr.Anees Ahmed Baig, Explore ML Facilitator	Explore ML BEGINNERS TRACK	123
2	21-08-2021	Mr.M.Teja Kiran Kumar, Comuper Vision Researcher, Yantrisiksha Technologies Pvt.Ltd. Hyd.	Seminar on STARTUP TALK on the Ocassion of WORLD ENTREPRENUERS DAY	33
3	06-11-2021	Mr.M.Sai Prasanth, Section Student Representative IEEE, Hyd.	Seminar on The Value of Joining IEEE and its Membership Benefits	152
4	06-12-2021	Mr.Santosh Vuppala, Project Manager, co-founder, home Ground,Hyd.	Seminar on The Startup Journey:How to Bring Ideas to Life ?	178

2020-21:

S.No.	Date of Guest Lecture/ Seminar	Details of Resourse Person (Name, Designation, Company / Institute, Location)	Topic Covered in Guest Lecture/ Seminar	No of students attended the Guest Lecture/ Seminar
1	04th June,2021	Dr. P Babu Sree Harsha, Research Associate,ISRO, :Ionospheric and Space Physics Group, National Atmospheric Research Laboratory	Seminar On Overview And Applications Of Navigation Satelite System In Global And Regional Scale	43
2	27th March,2021	Mr.M.Kirankumar,Yantrisiksha Technologies private Limited.	Seminar on Deep Learning Applications For Skill Development	24

2019-20:

S.No.	Date of Guest Lecture/ Seminar	Details of Resourse Person (Name, Designation, Company / Institute, Location)	Topic Covered in Guest Lecture/ Seminar	No of students attended the Guest Lecture/ Seminar
1	07-08-2019	Dr. Josephine Jeyanthan, Kalasalingam Academy of Research and Education, Srivalliputhur	Seminar on Malign cells processing in Medical Imaging	56

D. IMPACT ANALYSIS OF INDUSTRY INSTITUTE INTERACTION

- The students of ECE department have shown keen interest to participate in guest lectures, workshops and training offered by different industries. It helps to acquire industrial knowledge to identify and solve real time problems.
- Students picked up what they learnt at the workshops to implement their own mini project and also final year projects.
- The effectiveness of this practice can be assessed by the great response of the participants of the workshops/ trainings and App development competitions. Students implement their learning in final year projects.
- Students get more exposure to show their entrepreneurial spirit and project-based thinking.
- By guest lectures delivered by the experts from industry and alumni, awareness is created on the latest developments and trends of the industry by which the students could plan for their placement activities.

2.2.5 Initiatives related to industry internship/summer training (10) Institute

INITIATIVES:

- Internship is a part of the curriculum. The students are encouraged to take up internship programs during their semester break for 2 to 4 weeks. The students who fail to get internship from the industry, the department will arrange practical training program by industry experts for those students.
- Students are encouraged to attend summer training or internships
- The department encourages students to take up implant training during summer holidays in various prestigious organizations.

IMPLEMENTATION:

A.INDUSTRIAL TRAINING/TOURS FOR STUDENTS

- Industrial visits give greater clarity about the importance of Electronics and communication Engineering concepts. The students will practically experience these concepts
- Industrial tours are organized for students to provide an insight into the technology used in industries.
- Learning from textbooks, lectures and other study material does not suffice for holistic learning. Practical and hands-on learning is essential for better understanding the processes
- As the faculty from ECE department accompanied the students during the industrial tour, the industrial visit helps the faculty to correlate between theoretical and practical learning.

Table 2.2.5a:List of industrial visits by the students

S.No.	YEAR & SEM	INDUSTRY NAME	INDUSTRY LOCATION	DATE OF VISIT
1	IV-I	THUMBA ROCKET LAUNCHING STATION	TRIVENDRUM	24-01-2023
2	II-II	LAKSHMI NARASIMHA PACKAGING INDUSTRY	CHERVUKOMMU PALEM	21-03-2022
3	II-I	SWATHI PIPES INDUSTRY	ONGOLE	18-11-2019

B. INDUSTRY INTERNSHIP/SUMMER TRAINING

The students are encouraged to take up internship programs and summer trainings during their semester break. Faculty members give them guidelines, suggestions, scope and contact details of the internship. They also help the students by interacting with the industrial experts, providing the students recommendation letters and of the necessary supports. At the end of every semester or in vacation time, the students are allowed to carry out summer training in the organization to get practical exposure to the technologies implemented in industries.

Table 2.2.5b: List of sample internships attended by the students

Academic Year: 2021-22

S.No.	Name Of The Student	Year Of Study	Title Of Internship	From-To] (DD-MM-YYYY To DD-MM-YYYY (Duration)	Internship Provider	Venue Of Internship (Virtual/ Place Of Internship)
1	Atthota Likitha	III	Smart Internz	25-04-22 To 30-06-22 (One Month)	Sales force Administrator Virtual Internship	Hyderabad
2	Banka Sumalatha	III	AWS	08-07-2022 - 25-09-2022 (One Month)	Ai-MI Virtual Internship	Hyderabad
3	Bellamkonda Bhargavi	III	NSIC	1/8/2022 To 30/8/2022 (One Month)	The National Small Industries Corporations Ltd	Hyderabad
4	Chidithoti Kusuma Kumari	III	NSIC	1/8/2022 To 30/8/2022 (One Month)	Circuit Designing, Microcontroller, Embedded System &IoT	Hyderabad
5	Edara Lakshmi Indira	III	NSIC	1/8/2022 To 30/8/2022 (One Month)	Circuit Designing, Microcontroller, Embedded System &IoT	Hyderabad

Academic Year: 2020-21

S.No.	Name Of The Student	Year Of Study	Title Of Internship	From-To] (DD-MM-YYYY To DD-MM-YYYY(Duration)	Internship Provider	Venue Of Internship (Virtual/ Place Of Internship)
1	Avula Susmitha	II	Circuit Designing , Microcontroller & Pcb Design	(One Month) 01-06-2021 To 30-06-2021	NSIC	Hyderabad
2	Badri Harika Lakshmi	II	Circuit Designing , Microcontroller & Pcb Design	(One Month) 01-06-2021 To 30-06-2021	NSIC	Hyderabad
3	Baireddy Bhagyalakshmi	II	Circuit Designing , Microcontroller & Pcb Design	(One Month) 01-06-2021 To 30-06-2021	NSIC	Hyderabad
4	Bezawada Usha Sahithi	II	Circuit Designing , Microcontroller & Pcb Design	(One Month) 01-06-2021 To 30-06-2021	NSIC	Hyderabad
5	Bojja Navya	II	Circuit Designing , Microcontroller & Pcb Design	(One Month) 01-06-2021 To 30-06-2021	NSIC	Hyderabad

Academic Year:2019-20

S.No.	Name Of The Student	Year Of Study	Title Of Internship	From-To] (DD-MM-YYYY To DD-MM-YYYY(Duration)	Internship Provider	Venue Of Internship (Virtual/ Place Of Internship)
1	Achimsetty Naga Sai Lakshmi	II	Machine Learning	25-05-2020 To 26-06-2020 (One Month)	VI SOLUTIONS	Bangalore
2	Addanki Anusha	II	Advance Electronics Technology	29-05-2020 To 28-06-2020 (One Month)	NSIC	Hyderabad
3	Ammanabrolu Sasipriya	II	Advance Electronics Technology	29-05-2020 To 28-06-2020 (One Month)	NSIC	Hyderabad
4	Ammu Bindhu	II	Advance Electronics Technology	29-05-2020 To 28-06-2020 (One Month)	NSIC	Hyderabad
5	Ande Hemalatha	II	Advance Electronics Technology	29-05-2020 To 28-06-2020 (One Month)	NSIC	Hyderabad

***NSIC:National Small Industries Corporation**

राष्ट्रीय लघु उद्योग निगम–तकनीकी सेवा केन्द्र
THE NATIONAL SMALL INDUSTRIES CORPORATION LTD.
TECHNICAL SERVICES CENTRE
(भारत सरकार का उद्यम / A Government of India Enterprises)
ई.सी.आई.एल एक्स रोड, कुशाईगुडा, हैदराबाद – 500062, तेलंगाना, भारत।
E.C.I.L X Road, Kushaiguda, Hyderabad - 500062, Telangana, India.
एन एस आई सी
N S I C

क्रमांक / S.No 180125 दिनांक / Date: 06/07/2021

Certificate

This is to certify that Mr. / Ms. Sai Kiran Kadavakuduru
son/daughter of Mr. K. Vijaya Saradhi pursuing B.Tech in ECE from
(College Name) PACE INSTITUTE OF TECHNOLOGY AND SCIENCES
Roll No 19KQ1A04I2 has successfully completed the Internship Program
entitled/in the area of CIRCUIT DESIGNING, MICROCONTROLLER & PCB DESIGNING
under
our guidance. It is a bonafide work carried out by her/him from 01/06/2021 to 30/06/2021
He/She has completed the assigned module as per the requirements within the time frame
During the above period, the trainee's conduct was found Good

Project Coordinator
NSIC TECHNICAL SERVICES CENTRE HYDERABAD
Centre Head

यह प्रमाण पत्र होलोग्राम लगा होने के साथ ही मान्य होगा / This Certificate shall be valid only with affixed hologram

Figure 2.2.5a: Sample Internship Completion Certificate of the student

Assessment for Internship:

Internship/training of the student shall be assessed for 100 marks for R18. After the completion of internship the student shall submit a certificate and a report to the Project Review Committee (PRC) for Evaluation and to conduct a Viva-Voce Examination. Out of 100 marks, 40 marks shall be awarded for submission of certificate and report and 60 marks for presentation and Viva-Voce examination.

Table 2.2.5.c: Weightage of marks for Internship for R18

S. No.	Parameter	Marks
1	Internship Report	50
2	Presentation	30
3	Viva voce	20
	Total Marks	**100**

Assessment for Practical Training:

The practical training gained by student shall be assessed for 100 marks for R18. After the completion of Practical Training the student shall submit a report to Project Review Committee (PRC) for evaluation and to conduct a Viva-Voce Examination. Out of 100 marks 40 marks shall be awarded for day to day performance and submission of report and 60 marks for presentation and Viva-Voce examination.

C. IMPACT ANALYSIS

The following is the impact analysis observed on Industry Institute interactions

- Knowledge gained during internship program helped the students to implement in their project work.
- This internship program will be helpful in obtaining jobs

- The students' technical skills are improved.
- Students have an edge in the job market
- The students placement percentage has improved
- Students gain valuable work experience.
- Students gain the basic skills needed for the development of real world projects.

Academic Year	Number of students placed	Total No. of Students	% of students placed
2022-23	63	**210**	**30.00%**
2021-22	126	**209**	**60.28%**
2020-21	113	**209**	**54.06%**
2019-20	92	**211**	**43.60%**

Table 2.2.5c: Placements of the students

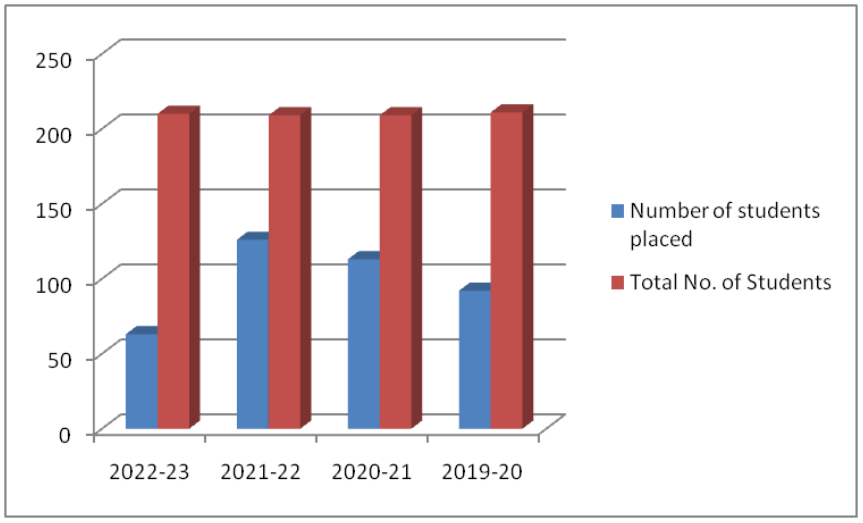

Figure 2.2.5c: Placements of the students

Table 2.2.5e: Impact of internships/ Industrial tours in improving the strengths of POs & PSOs.

Event	Mapping POs	MappingPSOs
Internships	P02,PO3,PO4,PO5,PO8,PO9,PO10,PO11,PO12	PSO1,PSO2
Practical Training	P02,PO3,PO4,PO5,PO8,PO9,PO10,PO11,PO12	PSO1,PSO2

D. STUDENT FEEDBACK ON INITIATIVE

- Every student of the department submits a feedback on the industrial interactions during visits, training programs and internships, soon after the completion of the same.
- The feedbacks obtained from the students are used effectively in strengthening the industrial relations of the department and also to guide the successor batches. The following Figure 2.2.5d shows the student feed back during industrial visit.
- The feedback also explores the content to be revised in curriculum to bridge the gap between academics and industry.

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NH-16, Near Vallurmma Temple, ONGOLE - 523 272, A.P., INDIA, Ph.: 08592 278315, 9581456310 | www.pace.ac.in

Department of Electronics and Communication Engineering

Name of the Industry: THUMBA ROCKET LAUNCHING STATION at TRIVENDRUM
Year& Sem: IV –I Date: 24/01/23

Industrial Visit Feedback Form

Name &Roll No (Optional): KOLUKULAPALLI SRAVIKA (19KQ1A0474)

S. No	Evaluation Parameters	Excellent 5	Good 4	Fair 3	Average 2	Poor 1
1	Relevance of the industrial visits w. r. t your curriculum		✓			
2	Industry visit bridge the gap between Industry and Institute		✓			
3	Explanation of the Persons Concerned about the Industry		✓			
4	Acquiring the Practical Knowledge through the Industrial Visit	✓				
5	Clarification of Doubts	✓				

Do you recommend this Industrial Visit for others: Yes/No

Any suggestions for Improvement:
Provide more industrial visits.

Figure 2.2.5d: Student feedback form for industrial visit.

3 COURSE OUTCOMES AND PROGRAM OUTCOMES (175) Total Ma

Define the Program specific outcomes

PSO1	An ability to isolate and solve complex problems in the domain of Electronics and Communication by selecting appropriate hardware and software tools.
PSO2	An ability to design, develop and validate inter disciplinary products, process by applying the knowledge and skills of Signal Processing, Embedded Systems, VLSI, Networking and Communication Engineering.

3.1 Establish the correlation between the courses and the Program Outcomes (POs) & Program Specific Outcomes (25) Tota

Institute

No. of Core Courses : 6	**C2 :** 2	**C3 :** 2	**C4 :** 2

Note : Number of Outcomes for a Course is expected to be around 6.

Course Name :	C2 02	Course Year :	2019-2020

Course Name	Statements
C2 02.1	Understand the operation on signals and systems and concept of orthogonality.
C2 02.2	Analyze the continuous-time signals using Fourier series, Fourier transform.
C2 02.3	Apply sampling theorem to convert continuous-time signals to discrete-time signal and reconstruct back.
C2 02.4	Understand the relationships among the various representations of LTI systems
C2 02.5	Analyze signals and systems properties using Laplace and Z-Transforms.

Course Name :	C2 10	Course Year :	2019-2020

Course Name	Statements
C2 10.4	Discuss different types of power amplifiers for practical applications of desired specifications.
C2 10.5	Analyze different tuned amplifier circuits.
C2 10.1	Analyze various transistor amplifier circuits and their frequencies responses.
C2 10.2	Analyze transistor amplifier circuits at high frequencies.
C2 10.3	Analyze the concepts of both positive and negative feedback in electronic circuits.

Course Name :	C3 03	Course Year :	2020-2021

Course Name	Statements
C3 03.1	Identify basic antenna parameters and Quantify the fields radiated by various types of antennas.
C3 03.2	Design and analyze antenna arrays.
C3 03.3	Design and analyze wire antennas, helical antennas and microstrip antennas.
C3 03.4	Design and analyze Reflector antennas, lens antennas, and horn antennas.
C3 03.5	Identify the characteristics of radio wave propagation.

Course Name :	C3 10	Course Year :	2020-2021

Course Name	Statements
C3 10.1	Apply the difference equations concept in the analyzation of discrete time systems
C3 10.2	Apply the FFT algorithm for solving the DFT of a given signal.
C3 10.3	Discuss the role of Z-Transform to design digital filters.
C3 10.4	Design a Digital filter (FIR&IIR) from the given specifications.
C3 10.5	Understanding the Multirate Processing concepts in various applications

Course Name :	C4 01	Course Year :	2021-2022

Course Name	Statements
C4 01.1	Demonstrate knowledge of a broad range of fundamental image processing and image analysis techniques.
C4 01.2	Analyze image processing problems to recognize and employ effective solutions.
C4 01.3	Design the practical solutions to a range of common image processing problems.
C4 01.4	Analyze various coding techniques for compression problems
C4 01.5	Describe the image information with transformation methods.

Course Name :	C4 08	Course Year :	2021-2022

Course Name	Statements
C4 08.1	Collect, manage, summarize and evaluate technical literature with the purpose of formulating a project proposal.
C4 08.2	Develop a cost-effective, environmental friendly solutions to problems by using modern tools for the need of industry and society as a team by developing skills and knowledge.
C4 08.3	Prepare a technical thesis report on real-time problems using engineering and management principals.
C4 08.4	Communicate about project outcomes effectively using good presentation skills by Demonstrating professionalism and ethics.

Course Articulation Matrix

1 . course name : C202

Course	Statements	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C202.1	Understand	3	2	-	-	-	-	-	-	-	-	-	2
C202.2	Analyze the	3	2	2	2	-	-	-	-	-	-	2	2
C202.3	Apply samp	1	1	-	1	-	-	-	-	-	-	2	1
C202.4	Understand	2	2	2	2	1	-	-	-	-	-	1	1
C202.5	Analyze sig	3	2	2	2	2	-	-	-	-	-	3	2
Average		**2.40**	**1.80**	**2.00**	**1.75**	**1.50**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**2.00**	**1.60**

2 . course name : C210

Course	Statements	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C210.4	Discuss diff	3	3	3	3	-	-	-	-	-	-	-	2
C210.5	Analyze diff	3	3	3	2	-	-	-	-	-	-	-	2
C210.1	Analyze var	3	3	3	3	-	-	-	-	-	-	-	3
C210.2	Analyze tra	2	3	3	3	-	-	-	-	-	-	-	3
C210.3	Analyze the	3	3	3	3	-	-	-	-	-	-	-	2
Average		**2.80**	**3.00**	**3.00**	**2.80**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**2.40**

3 . course name : C303

Course	Statements	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C303.1	Identify bas	2	3	2	3	-	-	2	-	-	-	-	2
C303.2	Design and	2	3	3	3	-	2	-	-	-	-	-	2
C303.3	Design and	2	3	3	3	2	2	-	-	-	-	-	2
C303.4	Design and	2	3	3	3	2	2	-	-	-	-	-	2
C303.5	Identify the	2	3	2	-	2	-	2	-	-	-	-	2
Average		**2.00**	**3.00**	**2.60**	**3.00**	**2.00**	**2.00**	**2.00**	**0.00**	**0.00**	**0.00**	**0.00**	**2.00**

4 . course name : C310

Course	Statements	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C310.1	Apply the d	3	3	2	2	1	-	-	-	-	-	-	1
C310.2	Apply the F	3	3	3	2	2	-	-	-	-	-	-	1
C310.3	Discuss the	3	3	3	2	2	-	-	-	-	-	-	2
C310.4	Design a D	3	3	3	3	3	-	-	-	1	-	1	2
C310.5	Understand	3	3	3	3	3	-	-	-	2	-	2	2
Average		**3.00**	**3.00**	**2.80**	**2.40**	**2.20**	**0.00**	**0.00**	**0.00**	**1.50**	**0.00**	**1.50**	**1.60**

5 . course name : C401

Course	Statements	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C401.1	Demonstrat	3	3	2	2	2	-	-	-	-	-	-	2
C401.2	Analyze ima	2	2	3	3	2	-	-	-	-	-	-	2
C401.3	Design the	3	3	3	3	2	2	-	-	-	-	2	2
C401.4	Analyze var	3	2	3	2	2	2	-	-	2	-	2	2
C401.5	Describe th	3	3	3	3	2	2	-	-	2	-	2	2
Average		**2.80**	**2.60**	**2.80**	**2.60**	**2.00**	**2.00**	**0.00**	**0.00**	**2.00**	**0.00**	**2.00**	**2.00**

6 . course name : C408

Course	Statements	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C408.1	Collect, ma	3	3	2	3	-	-	-	-	3	1	2	3
C408.2	Develop a c	3	3	3	3	3	3	3	2	3	2	3	3
C408.3	Prepare a t	3	3	-	-	-	-	-	3	3	3	3	3
C408.4	Communica	2	2	-	-	-	-	-	1	3	3	3	-
Average		**2.75**	**2.75**	**2.50**	**3.00**	**3.00**	**3.00**	**3.00**	**2.67**	**3.00**	**2.25**	**2.75**	**3.00**

1 . Course Name : C202

Course	PSO1	PSO2
C202.1	2	2
C202.2	2	2
C202.3	1	1
C202.4	3	3
C202.5	3	3
Average	**2.20**	**2.20**

2 . Course Name : C210

Course	PSO1	PSO2
C210.4	3	2
C210.5	3	2
C210.1	3	3
C210.2	3	3
C210.3	3	2
Average	**3.00**	**2.40**

3 . Course Name : C303

Course	PSO1	PSO2
C303.1	3	2
C303.2	3	2
C303.3	3	2
C303.4	3	2
C303.5	3	2
Average	**3.00**	**2.00**

4 . Course Name : C310

Course	PSO1	PSO2
C310.1	1	-
C310.2	2	3
C310.3	2	3
C310.4	2	3
C310.5	3	3
Average	**2.00**	**3.00**

5 . Course Name : C401

Course	PSO1	PSO2
C401.1	2	2
C401.2	2	3
C401.3	2	3
C401.4	2	3
C401.5	2	3
Average	**2.00**	**2.80**

6 . Course Name : C408

Course	PSO1	PSO2
C408.1	3	2
C408.2	3	2
C408.3	3	2
C408.4	-	-
Average	**3.00**	**2.00**

Program Articulation Matrix

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C101	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	2	2.33	PO11	2
C102	2.6	2.8	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C103	3	2.8	2.4	1.33	PO5	PO6	PO7	PO8	PO9	PO10	PO11	1.8
C104	3	2.8	2.6	2.6	2.6	PO6	PO7	PO8	PO9	2	1.5	1
C105	2.8	2	2.6	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C106	1	PO2	2	PO4	PO5	PO6	2	PO8	2	1	1	3
C107	3	2	2	2	PO5	PO6	PO7	PO8	PO9	PO10	PO11	1.5
C108	3	3	PO3	3	2	2	2	PO8	PO9	PO10	PO11	2
C109	1.6	2	1.8	1	1	1	PO7	PO8	2	PO10	1.6	1
C110	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	2	2.33	PO11	2
C111	2.6	2.8	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C112	1.4	1.6	2.2	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	1.8
C113	1.8	2.4	1.8	PO4	PO5	PO6	1	PO8	PO9	PO10	PO11	PO12
C114	2.8	2.8	2.8	2	2.4	1.75	PO7	PO8	PO9	PO10	PO11	1.6
C115	3	PO2	PO3	3	2	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C116	1.8	1	1	PO4	PO5	1.5	1	1	1	PO10	PO11	PO12
C117	3	2.8	2.8	1.33	1.50	1.50	PO7	PO8	PO9	PO10	PO11	1.4
C201	3	3	2.2	3	PO5	PO6	PO7	PO8	PO9	PO10	PO11	1.6
C202	2.4	1.8	2	1.75	1.5	PO6	PO7	PO8	PO9	PO10	2	1.6
C203	2.4	PO2	2.75	2.25	PO5	PO6	PO7	PO8	PO9	PO10	1	2.2
C204	2.8	2.2	2	2	PO5	PO6	PO7	PO8	PO9	PO10	PO11	2
C205	2.6	2.6	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C206	3	2	2	2	PO5	PO6	PO7	PO8	PO9	PO10	1	1
C207	3	3	2.75	3	PO5	PO6	PO7	PO8	3	PO10	PO11	3
C208	3	3	2.75	2.25	1.5	PO6	PO7	PO8	PO9	PO10	PO11	1.5
C209	3	1	1	PO4	PO5	1	2	PO8	PO9	PO10	PO11	1
C210	2.8	3	3	2.8	PO5	PO6	PO7	PO8	PO9	PO10	PO11	2.4
C211	2.2	2.4	2.6	2.2	PO5	2	PO7	PO8	PO9	PO10	PO11	2.4
C212	2	2	2	2	PO5	PO6	PO7	PO8	PO9	PO10	PO11	2
C213	2.6	2.2	2.2	1.33	PO5	PO6	PO7	PO8	PO9	PO10	3	2
C214	3	3	2.6	2.2	2	PO6	PO7	PO8	PO9	PO10	2	2.4
C215	3	2.67	3	2.67	1	PO6	PO7	PO8	3	PO10	PO11	2
C216	2	PO2	2	PO4	2	2	PO7	PO8	2	PO10	PO11	2
C217	2.75	2.5	2.25	2.33	2	PO6	PO7	PO8	2	PO10	PO11	2
C218	2.4	2	2	PO4	PO5	2	2	1	2	1	2.5	PO12
C301	1.67	3	2.6	2.4	3	PO6	PO7	PO8	PO9	PO10	2.4	2.6
C302	2	2.5	2.75	2.75	2.67	PO6	PO7	PO8	PO9	PO10	PO11	2.2
C303	2	3	2.6	3	2	2	2	PO8	PO9	PO10	PO11	2
C304	2.2	2.8	2.25	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C305	2.5	2	2	PO4	2	PO6	PO7	PO8	2	PO10	PO11	2
C306	2	PO2	2	2	PO5	PO6	PO7	PO8	2	PO10	PO11	2
C307	2	2	2	2	2	2	PO7	PO8	1	1	PO11	PO12
C308	1	2	3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	2
C309	2.5	2	2.5	PO4	2	PO6	PO7	PO8	PO9	3	PO11	2
C310	3	3	2.8	2.4	2.2	PO6	PO7	PO8	PO9	PO10	1.5	1.6
C311	1	2	2.6	3	3	PO6	PO7	PO8	PO9	PO10	2.67	2.67
C312	2.6	2.4	2	2	2	2	PO7	PO8	PO9	PO10	PO11	2.2
C313	3	2.6	2.6	2.5	2.5	PO6	PO7	PO8	PO9	PO10	2	2.8
C314	3	3	3	3	2.75	PO6	PO7	PO8	3	PO10	1	1
C315	2.2	2.25	2	2	2	2	2	PO8	2	PO10	2.25	2.2
C316	PO1	PO2	3	PO4	2	PO6	PO7	PO8	2	PO10	1	2
C317	2	2	2	2	PO5	PO6	PO7	2	1	1	3	2
C318	2	3	2	2.5	3	3	PO7	1	2	2.67	2.67	2
C401	2.8	2.6	2.8	2.6	2	2	PO7	PO8	PO9	PO10	2	2

C402	2.6	2.6	1.8	1.25	1.33	PO6	PO7	PO8	PO9	PO10	1.5	PO12
C403	2.6	2.6	2.4	2.6	2	1	1	PO8	PO9	PO10	PO11	1.6
C404	3	3	PO3	2.75	PO5	2	2	PO8	2.5	PO10	PO11	2
C405	PO1	PO2	3	PO4	3	PO6	3	PO8	3	PO10	3	3
C406	PO1	PO2	PO3	PO4	PO5	1.8	1.8	PO8	2	1.8	2.2	2
C407	2	3	2	2.5	3	3	PO7	1	2	2.67	2.67	2.5
C408	2.75	2.75	2.5	3	3	3	3	2	3	2.25	2.75	3

Course	PSO1	PSO2
C101	PSO1	PSO2
C102	PSO1	PSO2
C103	PSO1	PSO2
C104	1.4	PSO2
C105	PSO1	PSO2
C106	PSO1	PSO2
C107	PSO1	PSO2
C108	1.33	PSO2
C109	PSO1	PSO2
C110	PSO1	PSO2
C111	PSO1	PSO2
C112	PSO1	PSO2
C113	2	1
C114	1.75	1.6
C115	PSO1	PSO2
C116	3	1
C117	1	2
C201	2	2
C202	2.2	2.2
C203	2.8	2.6
C204	1	1
C205	1	PSO2
C206	PSO1	1
C207	2.25	2.75
C208	2.33	2
C209	PSO1	PSO2
C210	3	2.4
C211	2.4	1.8
C212	2	2
C213	2	2
C214	2.4	2.2
C215	2	2
C216	2	2
C217	2.75	2.25
C218	PSO1	PSO2
C301	2.8	2.8
C302	1.6	2.5
C303	3	2
C304	1	PSO2
C305	2	2
C306	2	2
C307	2	3
C308	PSO1	PSO2
C309	2.5	PSO2
C310	2	3
C311	2.4	3
C312	2	2

C313	2.6	2.6
C314	1.5	2.5
C315	1.8	2
C316	2.5	3
C317	PSO1	PSO2
C318	3	PSO2
C401	2	2.8
C402	2.4	PSO2
C403	2	2
C404	2	2
C405	3	2
C406	PSO1	PSO2
C407	3	PSO2
C408	3	2

3.2 Attainment of Course Outcomes (75) Tota

Institute

For the Evaluation of attainments CO's both direct and indirect assessment methods are used. The 80% weightage is considered for direct assessment which includes internal assessments (like Mid-examinations, Assignments, Classroom tests, Day to Day Evaluations, etc) and Semester end examinations. The remaining 20% weightage is based on course-end survey.

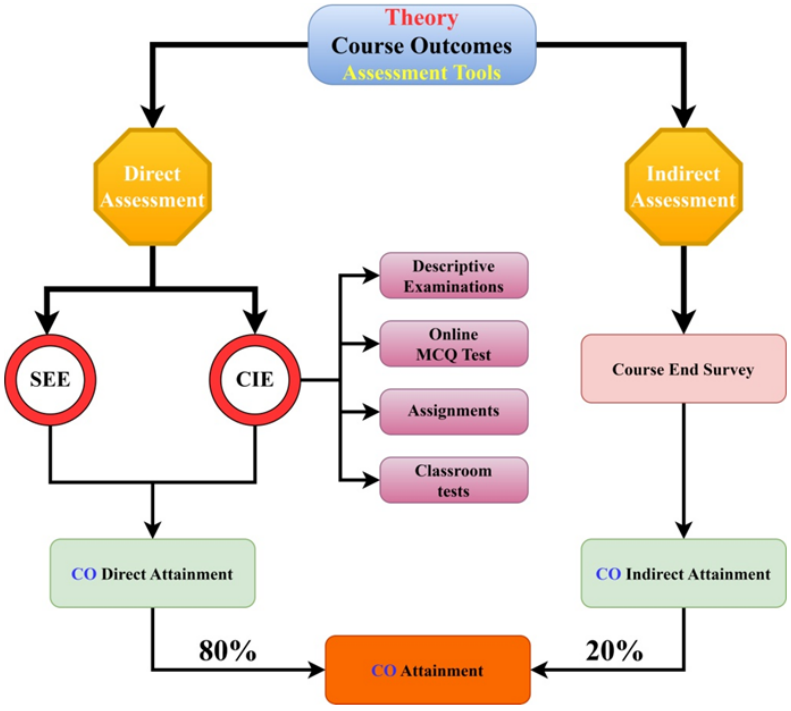
Internally developed excel spreadsheets are used for direct assessment. Feedback forms based on CO's were framed for each class and the feedback was taken from students for indirect assessment.

CO attainment process

The curriculum comprises of various types of courses like Theory Courses, Laboratory Courses, Mini-Project, Internship, Seminar, and Mandatory

courses.

Theory Attainment Process



Theory:

Mid-Examinations: Two mid-examinations are conducted for each semester. Mid-examinations serve to encourage students to keep up with course content covered. The Mid examination is of 120 minutes for 20 marks. The questions are framed in such a way that they should map Bloom's taxonomy, whereas each question is mapped to the respective course outcomes, which was evaluated based on the set attainment levels. The Multiple choice questions of 10 marks is also evaluated in both mid's of each course.

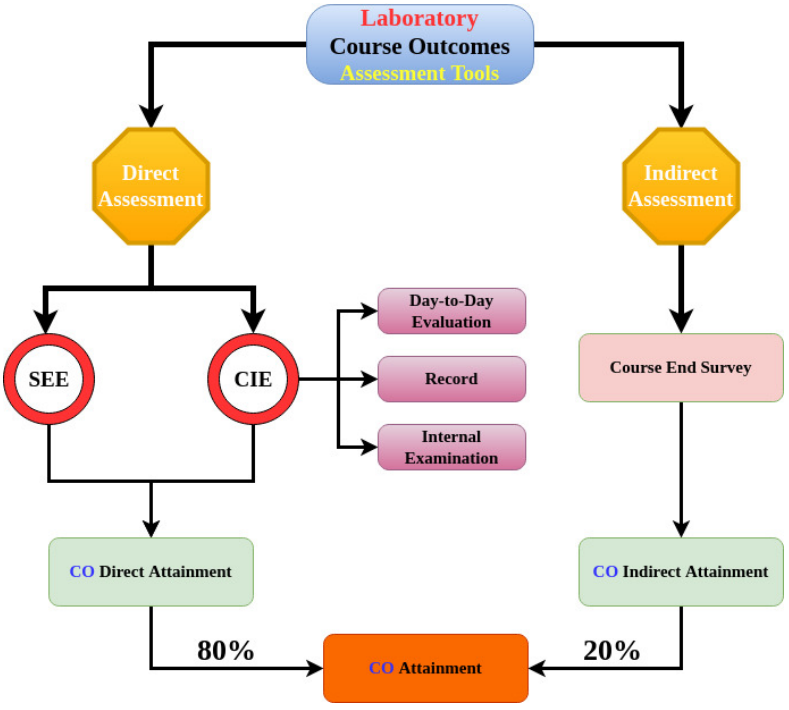
Assignments: Students are assigned course-related work and their submissions are evaluated on the basis of work quality. A total of 5 assignments are given per course where each assignment carries 5 Marks.

Classroom Test: Students are assigned course-related work and their class room performance is evaluated. A total of 5 classroom tests are given per course where each test carries 5 Marks.

Semester-End Examination: The semester-end examination is 180 minutes duration of 60 marks and covers the entire syllabus of the course. The questions are framed in such a way that they should satisfy Bloom's taxonomy, where as each question is mapped to the concurred course outcomes of the course. The CO's are evaluated based on the set attainment levels.

All direct assessment such as Mid-examinations, Assignments, Classroom test & Semester end examinations covers 80% of weightage and Indirect assessment consists of a course-end survey which comprises 20% of weightage.

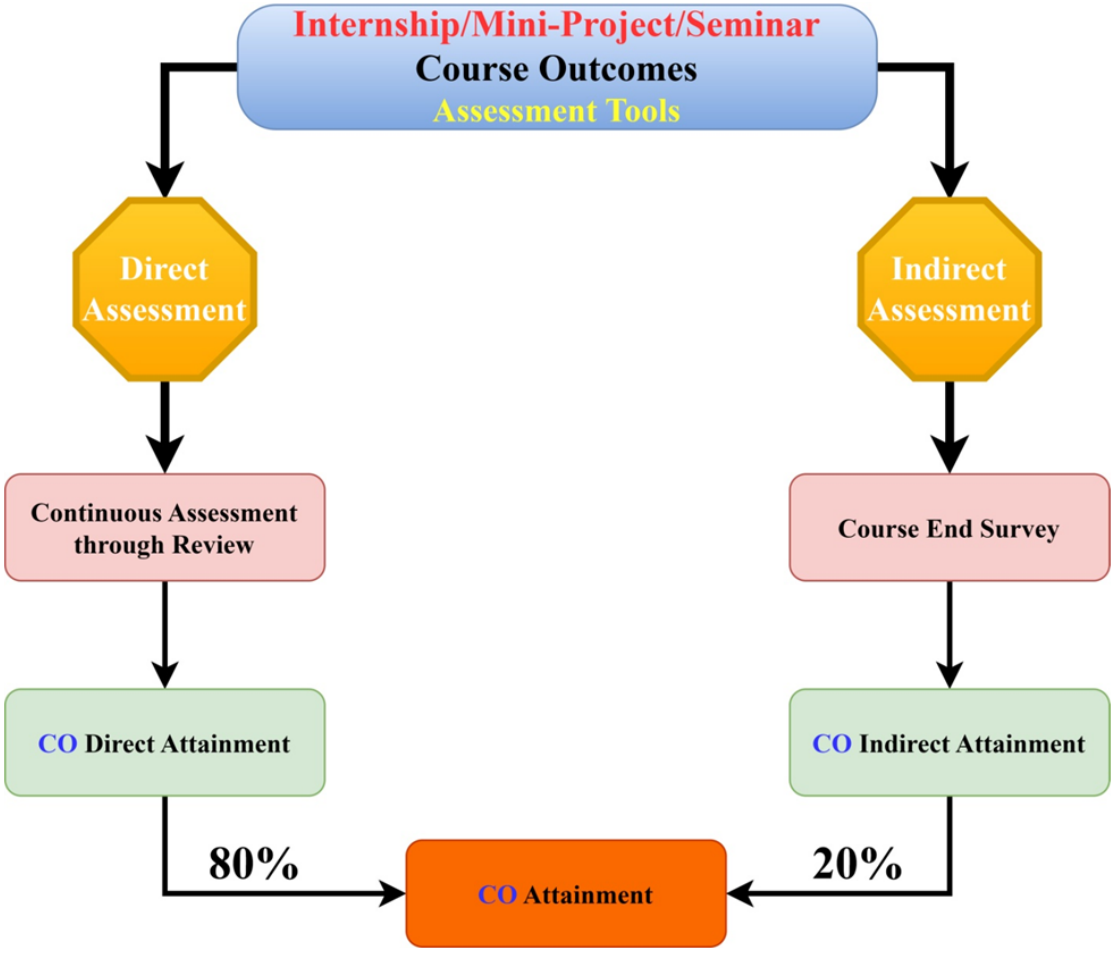
Laboratory Attainment Process:



Laboratory Courses:

For a total of 100 marks, continuous internal evaluation is 40 marks which comprises mainly day-to-day evaluation (20marks), Record (5marks), Internal Examinations (15marks) and Semester end examinations of 60 marks which cover 80% weightage of laboratory assessment and remaining 20% weightage for course end survey.

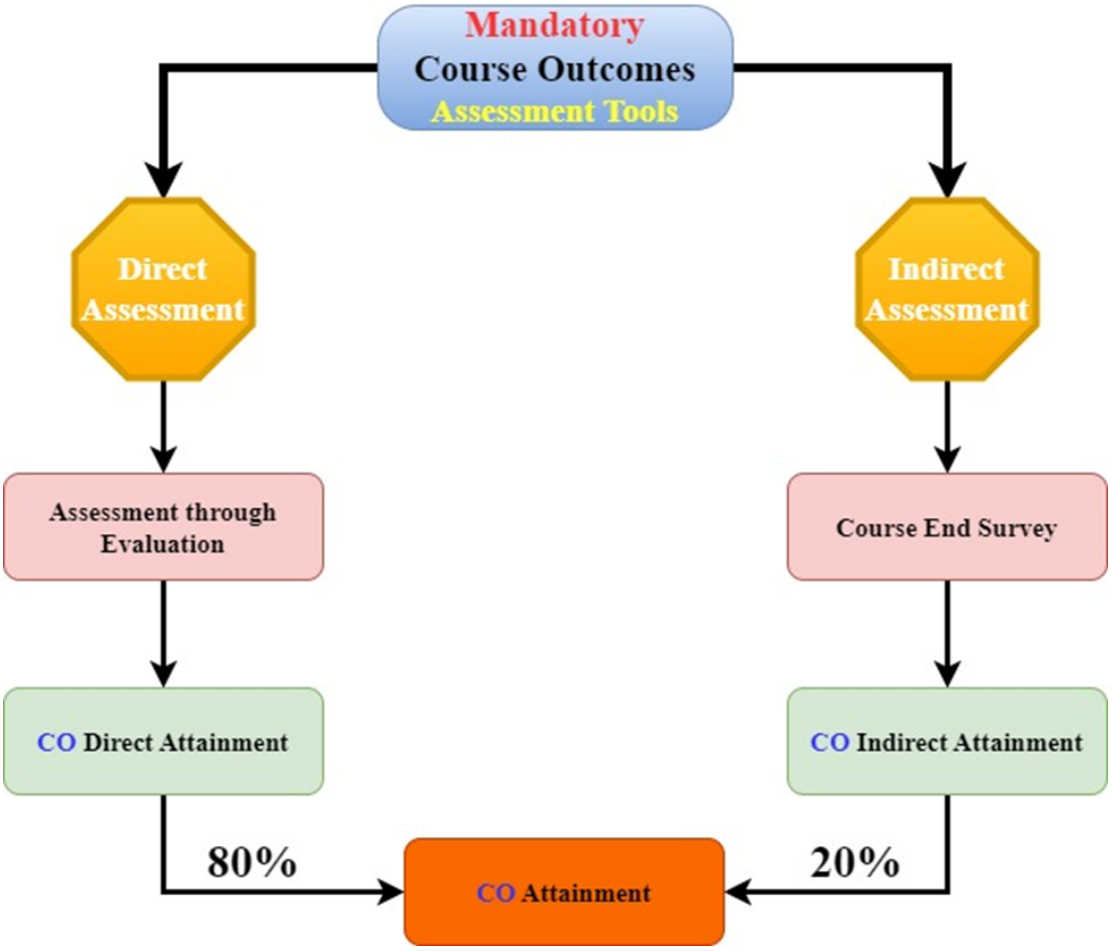
Internship/Mini-Project/Seminar Attainment Process:



Internship/Mini-Project/Seminar Courses:

As per curriculum internship/mini project/seminar course rubrics are assessed on internal examination procedures for 100 marks which carries 80% weightage and course end survey carries 20% weightage.

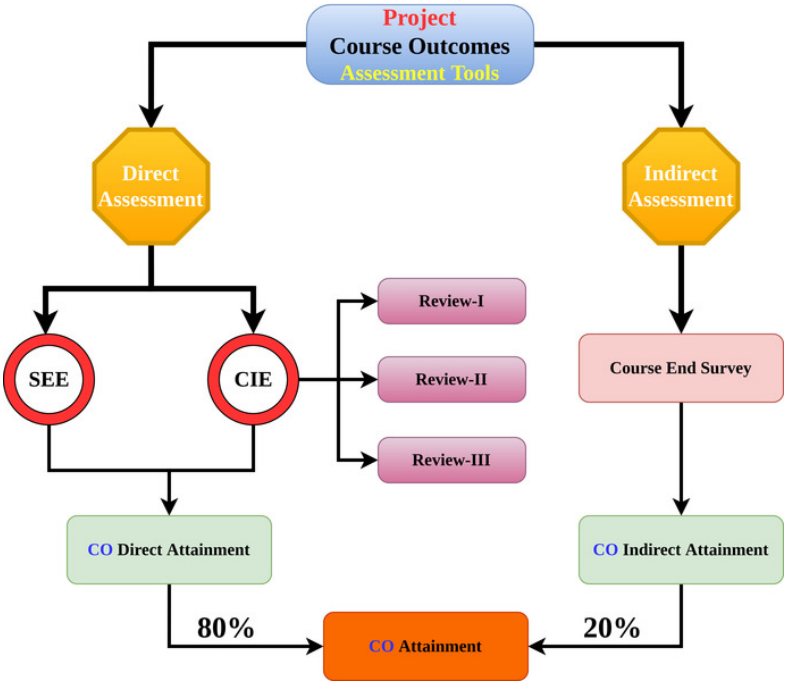
Mandatory Course Attainment Process:



Mandatory Courses:

As per curriculum Mandatory course rubrics are assessed on internal examination procedures for 100 marks which carries 80% weightage and course end survey carries 20% weightage.

Project Attainment Process:



Project Work:

Project work is carried out by students of IV - B. Tech, II – Semester. According to the curriculum, the internal marks allocated for project work is 80 marks, external evaluation marks are 120 which carries 80% weightage and course end survey carries 20% weightage.

Course End Survey is collected at the end of course from the students about their attainment level of COs. Feedback is collected with closed ended questions with options as

4- Excellent

3- Very Good

2- Good

1-Average

0-Poor

There response will be converted into percentage

$$\% \text{ of attainment} \frac{\sum \text{Grade} \times \text{Number of responses to that grade}}{\text{Total respnses}} \times 100$$

Depending on the level of attainment grade was decided as mentioned below.

% of attainment	Grade
More than or equal to 80%	3
More than or equal to 70% and less than 80%	2
More than or equal to 60% and less than 70%	1
Less than 60%	0

3.2.2 Record the attainment of Course Outcomes of all courses with respect to set attainment levels (65) Institute

As the 2018 admitted batch was the first autonomous batch, the threshold for internal and external exams was calculated based on the previous two batches (2016 & 2017) pass percentages in the course having the same/similar syllabus.

For 2018 admitted batch

2016 admitted & 2017 admitted batch average pass percentage	Internal Threshold	External Threshold
Less than 50%	55	40
More than or equal to 50% and less than 60%	57.5	42.5
More than or equal to 60% and less than 70%	60	45
More than or equal to 70% and less than 80%	62.5	47.5
More than or equal to 80%	65	50
If the course does not exist in R16	60	45

The percentage of students who secured more than the threshold was calculated. Grades were given on the % of students who secured more than the threshold value

Percentage of students secured more than the threshold	**Grade**
More than or equal to 80%	3
Less than 80% and more than or equal to 70%	2
Less than 70% and more than or equal to 60%	1
Less than 60%	0

Depending upon the percentage of students secured more than the threshold, the next batch threshold was decided by the same course as follows.

Next batch threshold for internal courses:

% of students secured more than the threshold value	**Action**
More than or equal to 95% and less than 100%	Change Threshold to Min (Present batch Thresold+10%, 70)
More than or equal to 90% and less than 95%	Change Threshold to Min (Present batch Thresold+7.5%,70)
More than or equal to 85% and less than 90%	Change Threshold to Min (Present batch Thresold+5%,70)
More than or equal to 80% and less than 85%	Change Threshold to Min (Present batch Thresold+2.5%,70)
Less than 80%	No Change in the threshold is required.

Theory attainment sample

Continuous Internal Evaluation:

PACE Institute of Technology and Sciences, Ongole
Course Outcome Attainment Sheet Internal (B.Tech-R18)

Programme Specilization:	ECE
Year :	II
Sem	I
Course Name:	Semiconductor Devices and Circuits
Course Code:	C201
A.Y:	2019-20
Batch:	2018-22
Course Type:	Non-Elective

Roll No	MID-1				MID-2				Assignment					Class Room Test					Online Test		Course Outcomes Attainment (CIE)				
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	A1	A2	A3	A4	A5	C1	C2	C3	C4	C5	MCQ-1	MCQ-2					
Max Marks	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	10	10	CO1	CO2	CO3	CO4	CO5
CO	1	2	3	2	3	4	5	4	1	2	3	4	5	1	2	3	4	5	1,2,3	3,4,5					
19KQ5A0416	5	5	5	5	4	4	5	5	5	5	4	5	5	5	5	5	5	5	7.50	10	94.74	95.83	89.58	95.83	100.00
19KQ5A0417	5	5	5	5	5	4	0	5	5	5	5	5	5	5	5	5	4	5	8.50	9	96.84	97.50	97.92	90.00	71.58
19KQ5A0418	5	5	5	1	5	5	3	0	5	5	4	5	5	5	5	5	5	4	8.50	9.5	96.84	80.83	94.17	78.33	83.16

INTERNAL					
	Threshold	62.5	62.5	62.5	62.5	62.5
	%students secured more than Threshold	90.86	88.83	90.36	89.85	90.36
	Internal Grade	3	3	3	3	3
	Next A.Y Threshold	70	67.5	70	67.5	70

Semester-End Examination:

PACE Institute of Technology and Sciences, Ongole

Course Outcome Attainment Sheet External (B.Tech-R18)

Programme	ECE
Year :	II
Sem:	I
Course Name:	Semiconductor Devices and Circuits
Course Code:	C201
A.Y:	2019-20
Batch:	2018-22
Course Type:	Non-Elective

Roll No	CO1	CO2	CO3	CO4	CO5	CO1	CO2	CO3	CO4	CO5
19KQ5A0416	9	6	12	7	4	75.00	50.00	100.00	58.33	33.33
19KQ5A0417	8	6	12	7	8	66.67	50.00	100.00	58.33	66.67
19KQ5A0418	8	2	12	7	0	66.67	16.67	100.00	58.33	0.00

EXTERNAL	Threshold	47.5	47.5	47.5	47.5	47.5
	%students secured more than Threshold	88.72	53.33	87.69	77.44	57.44
	External Grade	3	0	3	2	0
	Next A.Y Target Threshold	52.5	47.5	52.5	47.5	47.5

CO Overall Attainment:

CO WISE ATTAINMENT						
Particulars		C201.1	C201.2	C201.3	C201.4	C201.5
INTERNAL	Threshold Internal	62.5	62.5	62.5	62.5	62.5
	%students secured more than Threshold	90.55	88.56	90.05	89.55	90.05
	Internal Grade	3	3	3	3	3
	Next A.Y. Threshold	70	67.5	70	67.5	70
EXTERNAL	Threshold External	47.5	47.5	47.5	47.5	47.5
	%students secured more than Threshold	88.72	53.33	87.69	77.44	57.44
	External Grade	3	0	3	2	0
	Next A.Y. Target Threshold	52.5	47.5	52.5	47.5	47.5
Indirect Attainment		92.83	85.03	82.69	83.18	87.36
Indirect Grade		3	3	3	3	3
Overall Attainment		3.00	1.56	3.00	2.52	1.56

Lab attainment sample:

PACE Institute of Technology and Sciences, Ongole
Lab Course Outcome Attainment Sheet (B.Tech-R18)

Programme Specilization:	ECE
Year :	III
Sem	II
Course Name:	Digital Signal Processing Lab
Course Code:	C314
A.Y:	2020-21
Batch:	2018-22
Course Type:	LAB

Roll No	Day to Day Evalution										Record										Internal		External		Course Outcome Attainment (CIE)			
	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10	CO	Marks	CO	Marks	CO1	CO2	CO3	CO4
Max Marks	20	20	20	20	20	20	20	20	20	20	5	5	5	5	5	5	5	5	5	5	15		60					
CO	1	1	1	1	2	2	1	3	1	4	1	1	1	3	2	2	1	1	3	4	Mixed		Mixed		1	2	3	4
19K05A0414	15	15	15	15	15	15	15	15	15	15	4	4	4	4	4	4	4	4	4	4	4	13	4	47	75.86	76.00	76.67	80.00
19K05A0415	16	16	16	16	16	16	16	16	16	16	4	4	4	4	4	4	4	4	4	4	3	13	4	47	80.00	80.00	82.22	80.00
19K05A0416	17	17	17	17	17	17	17	17	17	17	5	5	5	5	5	5	5	5	5	5	2	14	4	50	87.59	89.23	90.00	88.00
19K05A0417	14	14	14	14	14	14	14	14	14	14	4	4	4	4	4	4	4	4	4	4	4	12	3	45	71.72	72.00	73.33	75.00
19K05A0418	15	15	15	15	15	15	15	15	15	15	4	4	4	4	4	4	4	4	4	4	1	12	4	42	76.25	76.00	76.67	76.00

	Particulars	C314.1	C314.2	C314.3	C314.4
INTERNAL	Threshold	65	65	65	65
	%students secured more than Threshold	92.61	92.61	92.61	94.36
	Internal Grade	3	3	3	3
	Next A.Y	70	70	70	70
EXTERNAL	Threshold	50	50	50	50
	%students secured more than Threshold	100	100	100	100
	External Grade	3	3	3	3
	Next A.Y Target	60	60	60	60

Lab CO Overall Attainment:

CO WISE ATTAINMENT					
Particulars		C314.1	C314.2	C314.3	C314.4
INTERNAL	Threshold Internal	65	65	65	65
	%students secured more than Threshold	92.61	92.61	92.61	94.36
	Internal Grade	3	3	3	3
	Next A.Y Threshold	70	70	70	70
EXTERNAL	Threshold External	50	50	50	50
	%students secured more than Threshold	100	100	100	100
	External Grade	3	3	3	3
	Next A.Y Target Threshold	60	60	60	60
Indirect Attainment		88.52	87.45	92.45	94.13
Indirect Grade		3	3	3	3
Overall Attainment		3.00	3.00	3.00	3.00

3.3 Attainment of Program Outcomes and Program Specific Outcomes (75) Tota

3.3.1 Describe assessment tools and processes used for measuring the attainment of each Program Outcome and Program Specific Outcomes (10) Institute

Course Outcomes (CO) arethe statements that declare what students should be able to do at the end of a course. At the end of each course, the Program Outcomes (CO)/Program Specific Outcomes (PSO) assessment is done from the CO attainment. Each course has defined with set of Course Outcomes and corresponding evaluation criteria. The COs are mapped to the POs and PSOs under scale of 3, 2, 1 and '-', which are used to provide the quantitative measurement of how well the Pos and PSOs are mapped.

Level	Correlation level
3	Substantial (High) Correlation
2	Moderate (Medium) Correlation
1	Slight (Low) Correlation
-	Indicates there is no correlation.

The performance of the students in the all assessment methods during the semester in each course is used to compute the level of attainment of the COs. The CO attainment and CO-PO/PSO mappings are used to measure the attainment of POs and PSOs.

PO/PSO assessment is done by giving 80% weightage to direct assessment and 20% weightage to indirect assessment. Direct assessment is based on CO attainment from the process described in 3.2.1. Direct methods display the students' knowledge and skills from their performance in the various academic activities like Continuous Internal Evaluation (CIE), Semester End Examinations (SEE), Laboratory's, Internships, Mini-Project, seminar, and project. These methods provide a sampling of what students know and/or can do and provide strong evidence of student learning. Average of CO-PO/PSO attainment of all the courses is considered as direct assessment tool for PO/PSO attainment.

Surveys like Student Exit Survey, Employer Survey and Faculty Survey are considered as indirect attainment tools for PO/PSO attainment. Student Exit Survey is collected at the end of program from students about their attainment level of POs and PSOs. Employer survey is collected from the employer about students PO/PSOs level of attainment. Staff Survey is collected from the staff regarding students PO/PSOs level of attainment.

Feedback is collected with closed ended questions with options as

4- Excellent

3- Very Good

2- Good

1-Average

0-Poor

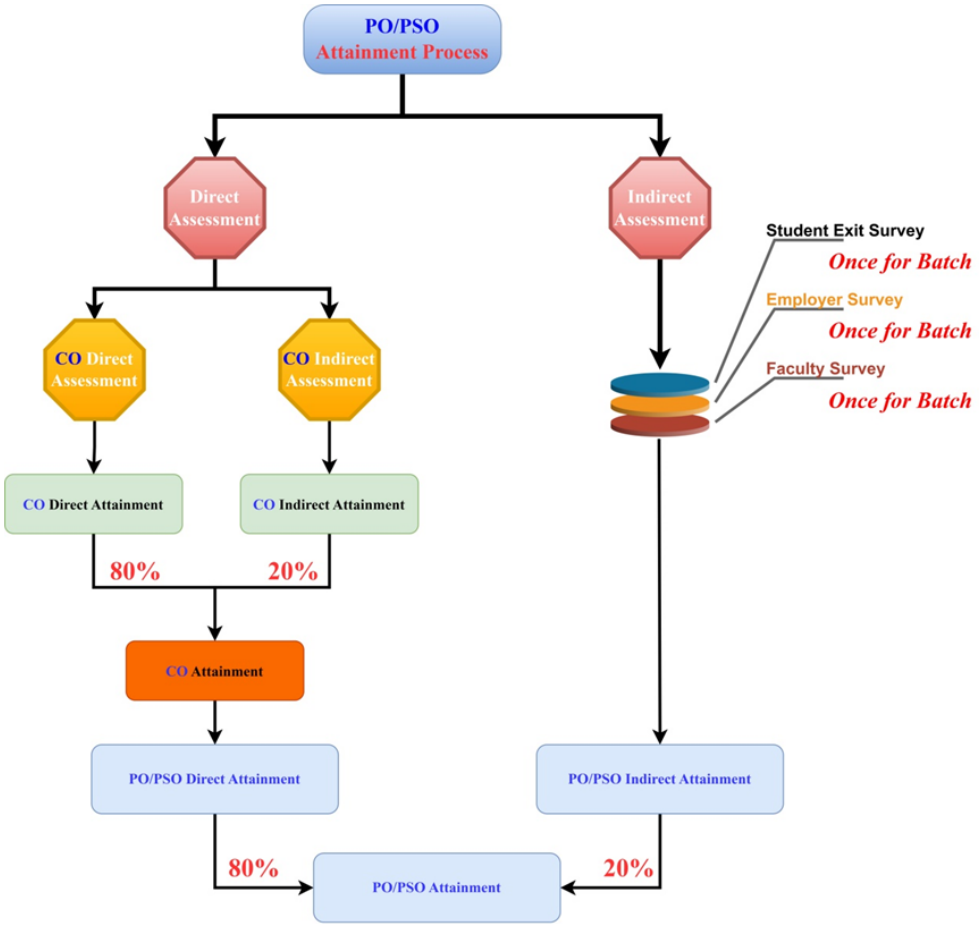
There response will be converted into percentage

$$\%\ \text{of attainment} = \frac{\sum \text{Grade} \times \text{Number of responses to that grade}}{\text{Total respnses}} \times 100$$

Depending on the level of attainment grade was decided as mentioned below.

% of attainment	Grade
More than or equal to 80%	3
More than or equal to 70% and less than 80%	2
More than or equal to 60% and less than 70%	1
Less than 60%	0

PO/PSO attainment Process:



Sample PO/PSO Attainment for a Course:

PACE Institute of Technology and Sciences, Ongole
Coursewise PO, PSO Attainment Sheet (B.Tech-R18)

Programme Specilization:	ECE
Year :	II
Sem:	II
Course Name:	Electromagnetic waves and Transmission Lines
Course Code:	C211
A.Y:	2019-20
Batch:	2018-22
Course Type:	Non-Elective

CO-PO, PSO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	CO-Avg
C211.1	3	3	3	1	-	-	-	-	-	-	-	2	2	2	2.29
C211.2	2	2	2	2	-	-	-	-	-	-	-	2	2	1	1.86
C211.3	2	2	3	3	-	2	-	-	-	-	-	3	2	2	2.38
C211.4	2	3	2	2	-	2	-	-	-	-	-	2	3	2	2.25
C211.5	2	2	3	3	-	2	-	-	-	-	-	3	3	2	2.50
Avg	**2.20**	**2.40**	**2.60**	**2.20**	-	**2.00**	-	-	-	-	-	**2.40**	**2.40**	**1.80**	**2.25**

CO WISE ATTAINMENT

	Particulars	C211.1	C211.2	C211.3	C211.4	C211.5
INTERNAL	Threshold Internal	60	60	60	60	60
	%students secured more than Threshold	84.65	88.61	87.62	87.62	79.7
	Internal Grade	3	3	3	3	2
	Next A.Y. Threshold	62.5	65	65	65	60
EXTERNAL	Threshold External	45	45	45	45	45
	%students secured more than Threshold	83.51	86.6	69.07	82.99	56.7
	External Grade	3	3	1	3	0
	Next A.Y. Target Threshold	47.5	50	45	47.5	45
Indirect Attainment		85.09	85.47	80.18	87.55	81.06
Indirect Grade		3	3	3	3	3
Overall Attainment		**3.00**	**3.00**	**2.04**	**3.00**	**1.24**

PO, PSO ATTAINMENT

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	CO-Avg
C211.1	3.00	3.00	3.00	1.00	-	-	-	-	-	-	-	2.00	2.00	2.00	2.29
C211.2	2.00	2.00	2.00	2.00	-	-	-	-	-	-	-	2.00	2.00	1.00	1.86
C211.3	1.36	1.36	2.04	2.04	-	1.36	-	-	-	-	-	2.04	1.36	1.36	1.62
C211.4	2.00	3.00	2.00	2.00	-	2.00	-	-	-	-	-	2.00	3.00	2.00	2.25
C211.5	0.83	0.83	1.24	1.24	-	0.83	-	-	-	-	-	1.24	1.24	0.83	1.04
Avg	**1.84**	**2.04**	**2.06**	**1.66**	-	**1.40**	-	-	-	-	-	**1.86**	**1.92**	**1.44**	**1.81**

3.3.2 Provide results of evaluation of each PO & PSO (65) Institute

PO Attainment

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C101	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	2	2.31	PO11	1.87
C102	1.9	1.97	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C103	2.62	2.42	2.14	1.17	PO5	PO6	PO7	PO8	PO9	PO10	PO11	1.54
C104	2.52	2.35	2.18	2.18	2.18	PO6	PO7	PO8	PO9	1.68	1.26	0.84
C105	2.54	1.81	2.34	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C106	1	PO2	2	PO4	PO5	PO6	2	PO8	2	1	1	3
C107	3	2	2	2	PO5	PO6	PO7	PO8	PO9	PO10	PO11	1.5
C108	3	3	PO3	3	2	2	2	PO8	PO9	PO10	PO11	2
C109	1.60	2	1.8	1	1	1	PO7	PO8	2	PO10	1.6	1
C110	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	2	1.85	PO11	2
C111	1.64	1.84	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C112	1.3	1.41	2.01	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	1.67
C113	1.64	2.18	1.64	PO4	PO5	PO6	0.9	PO8	PO9	PO10	PO11	PO12
C114	1.87	1.87	1.87	1.28	1.66	1.11	PO7	PO8	PO9	PO10	PO11	1.12
C115	3	PO2	PO3	3	2	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C116	1.8	1	1	PO4	PO5	1.5	1	1	1	PO10	PO11	PO12
C117	3	2.8	2.8	1.33	1.5	1.5	PO7	PO8	PO9	PO10	PO11	1.4
C201	2.33	2.33	1.66	2.33	PO5	PO6	PO7	PO8	PO9	PO10	PO11	1.25
C202	1.47	1.11	1.11	1.04	0.94	PO6	PO7	PO8	PO9	PO10	1.29	1
C203	2.04	PO2	2.15	1.73	PO5	PO6	PO7	PO8	PO9	PO10	0.77	1.84
C204	1.87	1.53	1.57	1.36	PO5	PO6	PO7	PO8	PO9	PO10	PO11	1.36
C205	2.12	2.02	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C206	2.14	1.42	1.42	1.42	PO5	PO6	PO7	PO8	PO9	PO10	0.71	0.71
C207	3	3	2.75	3	PO5	PO6	PO7	PO8	3	PO10	PO11	3
C208	3	3	2.75	2.25	1.5	PO6	PO7	PO8	PO9	PO10	PO11	1.5
C209	1.24	0.41	0.41	PO4	PO5	0.41	0.83	PO8	PO9	PO10	PO11	0.41
C210	1.9	2.04	2.04	1.94	PO5	PO6	PO7	PO8	PO9	PO10	PO11	1.66
C211	1.84	2.04	2.06	1.66	PO5	1.4	PO7	PO8	PO9	PO10	PO11	1.86
C212	1.3	1.3	1.3	1.3	PO5	PO6	PO7	PO8	PO9	PO10	PO11	1.3
C213	1.99	1.72	1.72	1.12	PO5	PO6	PO7	PO8	PO9	PO10	2.52	1.55
C214	3	3	2.6	2.2	2	PO6	PO7	PO8	PO9	PO10	2	2.4
C215	3	2.67	3	2.67	1	PO6	PO7	PO8	3	PO10	PO11	2
C216	2	PO2	2	PO4	2	2	PO7	PO8	2	PO10	PO11	2
C217	2.75	2.5	2.25	2.33	2	PO6	PO7	PO8	2	PO10	PO11	2
C218	0.64	0.4	0.4	PO4	PO5	0.93	0.4	0.2	0.4	0.2	0.5	PO12
C301	1.08	2.04	1.54	1.38	1.56	PO6	PO7	PO8	PO9	PO10	1.38	1.48
C303	1.57	2.36	2.06	2.2	1.89	1.61	1.52	PO8	PO9	PO10	PO11	1.57
C304	1.4	1.71	1.33	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C305	2.5	2	2	PO4	2	PO6	PO7	PO8	2	PO10	PO11	2
C306	2	PO2	2	2	PO5	PO6	PO7	PO8	2	PO10	PO11	2
C307	2	2	2	2	2	2	PO7	PO8	1	1	PO11	PO12
C308	0.63	2	1.88	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	1.09
C310	2.33	2.33	2.16	1.86	1.69	PO6	PO7	PO8	PO9	PO10	1.26	1.28
C311	1	2	2.22	2.52	3	PO6	PO7	PO8	PO9	PO10	2.08	2.08
C312	2.18	1.98	1.68	1.6	1.6	1.68	PO7	PO8	PO9	PO10	PO11	1.85
C313	2.68	2.41	2.41	2.5	2.34	PO6	PO7	PO8	PO9	PO10	2	2.61
C314	3	3	3	3	2.75	PO6	PO7	PO8	3	PO10	1	1
C315	2.2	2.25	2	2	2	2	2	PO8	2	PO10	2.25	2.2
C316	PO1	PO2	3	PO4	2	PO6	PO7	PO8	2	PO10	1	2
C317	0.51	0.4	0.4	0.4	PO5	PO6	PO7	0.4	0.2	0.2	0.76	0.51
C318	2	3	2	2.5	3	3	PO7	1	2	2.67	2.67	2
C401	2.06	1.9	1.97	1.8	1.45	1.4	PO7	PO8	PO9	PO10	1.4	1.45
C402	1.7	1.7	1.17	0.88	0.78	PO6	PO7	PO8	PO9	PO10	1.02	PO12

C403	2.47	2.41	2.21	2.41	1.87	0.94	0.94	PO8	PO9	PO10	PO11	1.47
C404	3	3	PO3	2.75	PO5	2	2	PO8	2.5	PO10	PO11	2
C405	PO1	PO2	3	PO4	3	PO6	3	PO8	3	PO10	3	3
C406	PO1	PO2	PO3	PO4	PO5	1.16	1.16	PO8	1.25	1.16	1.45	1.25
C407	2	3	2	2.5	3	3	PO7	1	2	2.67	2.67	2.5
C408	2.75	2.75	2.5	3	3	3	3	2	3	2.25	2.75	3
C302	1.52	1.82	2.07	1.79	1.55	PO6	PO7	PO8	PO9	PO10	PO11	1.53
C309	2.5	2	2.5	PO4	2	PO6	PO7	PO8	PO9	3	PO11	2

PO Attainment Indirect

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
Student Exi	3	3	3	3	3	3	3	3	3	3	3	3
Employer S	3	3	3	3	3	3	3	3	3	3	3	3
Faculty Sur	3	3	3	3	3	3	3	3	3	3	3	3

PO Attainment Level

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
InDirect Attainment	3	3	3	3	3	3	3	3	3	3	3	3
Direct Attainment	2.06	2.06	1.96	1.96	1.95	1.68	1.60	0.93	1.97	1.67	1.60	1.71

PSO Attainment

Course	PSO1	PSO2
C101	PSO1	PSO2
C102	PSO1	PSO2
C103	PSO1	PSO2
C104	1.18	PSO2
C105	PSO1	PSO2
C106	PSO1	PSO2
C107	PSO1	PSO2
C108	1.33	PSO2
C109	PSO1	PSO2
C110	PSO1	PSO2
C111	PSO1	PSO2
C112	PSO1	PSO2
C113	1.81	0.90
C114	1.19	1.09
C115	PSO1	PSO2
C116	3	1
C117	1	2
C201	1.55	1.55
C202	1.35	1.35
C203	2.26	2.12
C204	0.68	0.68
C205	0.81	PSO2
C206	PSO1	0.71
C207	2.25	2.75
C208	2.33	2
C209	PSO1	PSO2
C210	2.04	1.66
C211	1.92	1.44
C212	1.3	1.3
C213	1.55	1.55
C214	2.4	2.2
C215	2	2
C216	2	2
C217	2.75	2.25
C218	PSO1	PSO2
C301	1.65	1.65
C302	1.15	1.58

C303	2.36	1.57
C304	0.62	PSO2
C305	2	2
C306	2	2
C307	2	3
C308	PSO1	PSO2
C310	1.58	2.28
C311	2.11	2.62
C312	1.68	1.68
C313	2.41	2.41
C314	1.5	2.5
C315	1.8	2
C316	2.5	3
C317	PSO1	PSO2
C318	3	PSO2
C401	1.45	1.97
C402	1.57	PSO2
C403	1.87	1.87
C404	2	2
C405	3	2
C406	PSO1	PSO2
C407	3	PSO2
C408	3	2
C309	2.5	PSO2

PSO Attainment Indirect

Survey	PSO1	PSO2
Student Exit Survey	3	3
Employer Survey	3	3
Faculty Survey	3	3

PSO Attainment Level

Course	PSO1	PSO2
Direct Attainment	1.90	1.86
InDirect Attainment	3	3

4 STUDENTS' PERFORMANCE (100) Total M

Table 4.1

Item (Information to be provided cumulatively for all the shifts with explicit headings, wherever applicable)	2022-23 (CAY)	2021-22 (CAYm1)	2020-21 (CAYm2)	2019-20 (CAYm3)	2018-19 (CAYm4)	2017-18 (CAYm5)	2016-17 (CAYm6)
Sanctioned intake of the program(N)	180	180	180	180	180	180	180
Total number of students admitted in first year minus number of students migrated to other programs/ institutions plus No. of students migrated to this program (N1)	198	198	191	193	180	180	180
Number of students admitted in 2nd year in the same batch via lateral entry (N2)	0	18	19	18	18	24	15
Separate division students, If applicable (N3)	0	0	0	0	0	0	0
Total number of students admitted in the programme(N1 + N2 + N3)	198	216	210	211	198	204	195

Table 4.2

Year of entry	Total No of students admitted in the program (N1 + N2 + N3)	Number of students who have successfully graduated without backlogs in any semester/ year of study (Without Backlog means no compartment or failures in any semester/ year of study)			
		I year	II year	III year	IV year
2022-23 (CAY)	198				
2021-22 (CAYm1)	216	119			
2020-21 (CAYm2)	210	132	111		
2019-20 (CAYm3)	211	127	94	90	
2018-19 (LYG)	198	134	121	111	108
2017-18 (LYGm1)	204	66	56	54	51
2016-17 (LYGm2)	195	63	43	40	40

Table 4.3

Year of entry	Total No of students admitted in the program (N1 + N2 + N3)	Number of students who have successfully graduated in stipulated period of study) [Total of with Backlog + without Backlog]			
		I year	II year	III year	IV year
2022-23 (CAY)	198				
2021-22 (CAYm1)	216	124			
2020-21 (CAYm2)	210	165	149		
2019-20 (CAYm3)	211	183	191	166	
2018-19 (LYG)	198	169	179	175	166
2017-18 (LYGm1)	204	154	157	141	134
2016-17 (LYGm2)	195	138	121	114	108

4.1 Enrolment Ratio (20) Tota

Institute

	N (From Table 4.1)	N1 (From Table 4.1)	Enrollment Ratio [(N1/N)*100]
2022-23 (CAY)	180	198	110.00
2021-22 (CAYm1)	180	198	110.00
2020-21 (CAYm2)	180	191	106.11

Average [(ER1 + ER2 + ER3) / 3] : 108.70

Assessment : 20.00

4.2 Success Rate in the stipulated period of the program (20) Tot

4.2.1 Success rate without backlogs in any semester / year of study (15) Institute

Item	Latest Year of Graduation, LYG (2018-19)	Latest Year of Graduation minus 1, LYGm1 (2017-18)	Latest Year of Graduation minus 2 LYGm2 (2016-17)
X Number of students admitted in the corresponding First year + admitted in 2nd year via lateral entry and seperated division, if applicable	198.00	204.00	195.00
Y Number of students who have graduated without backlogs in the stipulated period	108.00	51.00	40.00
Success Index [SI = Y / X]	0.55	0.25	0.21

Average SI [(SI1 + SI2 + SI3) / 3] : 0.34

Assessment [15 * Average SI] : 5.10

4.2.2 Sucess rate in stipulated period (5) Institute

Item	Latest Year of Graduation, LYG (2018-19)	Latest Year of Graduation minus 1, LYGm1 (2017-18)	Latest Year of Graduation minus 2 LYGm2 (2016-17)
X Number of students admitted in the corresponding First year + admitted in 2nd year via lateral entry and seperated division, if applicable	198.00	204.00	195.00
Y Number of students who have graduated in the stipulated period	166.00	134.00	108.00
Success Index [SI = Y / X]	0.84	0.66	0.55

Average SI[(SI1 + SI2 + SI3) / 3]: 0.68

Assessment [5 * Average SI] : 3.42

Note : If 100% students clear without any backlog then also total marks scored will be 20 as both 4.2.1 & 4.2.2 will be applicable simultaneously.

4.3 Academic Performance in Second Year (10) Tot

Institute

Academic Performance	CAYm2 (2020-21)	CAYm3 (2019-20)	LYG (2018-19)
Mean of CGPA or mean percentage of all successful students(X)	7.95	7.66	8.07
Total number of successful students (Y)	149.00	191.00	179.00
Total number of students appeared in the examination (Z)	184.00	201.00	187.00
API [X * (Y/Z)]	6.44	7.28	7.72

Average API [(AP1 + AP2 + AP3)/3] : 7.15

Assessment [AverageAPI] : 7.15

4.4 Placement, Higher Studies and Entrepreneurship (30) Tota

Institute

Item	LYG(2018-19)	LYGm1(2017-18)	LYGm2(2016-17)
Total No of Final Year Students(N)	175.00	141.00	114.00
No of students placed in the companies or goverment sector(X)	126.00	113.00	92.00
No of students admitted to higher studies with valid qualifying scores(GATE or equivalent State or National Level tests, GRE, GMAT etc.) (Y)	8.00	6.00	4.00
No of students turned enterpreneur in engineering/technology (Z)	0.00	0.00	0.00
Placement Index [(X+Y+Z)/N] :	0.77	0.84	0.84

Average Placement [(P1 + P2 + P3)/3] : 0.82

Assessment [30 * Average Placement] : 24.50

Program Name : Electronics & Communication Engg.
Assessment Year : 2021-22 (CAYm1)

S.No	Student Name	Enrollment No	Employee Name	Appointment No
1	ACHIMSETTY NAGA SAI LAKSHMI	18KQ1A0401	WIPRO	23077258&30/01/2022
2	ADDANKI ANUSHA	18KQ1A0402	WIPRO	22992684&22/01/22
3	AMMANABROLU SASIPRIYA	18KQ1A0403	HCL	22/09/2022
4	AMMU BINDHU	18KQ1A0404	HEXAWARE	14/01/2022
5	ANDE HEMALATHA	18KQ1A0405	TIGER ANALYTICS	15/2/2022
6	BANDARU ANILA	18KQ1A0406	JOBIAK	02-02-2022
7	BANDARU APARNA DURGA	18KQ1A0407	TCS	TCSL/DT20218185985 & 12/11/2021
8	BAPATHU INDIRA	18KQ1A0408	WIPRO	22994067&23/01/2022
9	BATTARUSETTI AKHILA	18KQ1A0409	WIPRO	23283519&18/01/2022
10	BELLAMKONDA ANITHA	18KQ1A0410	MPHASIS	MPHTH_CD2022-0796
11	BENGULURI MANISHA	18KQ1A0411	HCL	19/08/2022
12	BILLA VARSHA	18KQ1A0413	JOBIAK	02-02-2022
13	CHALLA THRIVENI	18KQ1A0414	WIPRO	22995069&31/3/2022
14	CHEERLADINNE MOULI	18KQ1A0415	JOBIAK	02-02-2022
15	CHERUKURI MEGHANA	18KQ1A0416	MINDTREE	TN/80030518/22 & 22/4/2022
16	CHITITHOTI SWETHA	18KQ1A0417	TOLLPLUS	07-01-2022
17	DAGGUMATI AMRUTHA	18KQ1A0418	WIPRO	22996732&5/4/2022
18	DHANISETTY ALEKHYA	18KQ1A0419	HCL	22/09/2022
19	DONEMPUDI VANAJA RANI	18KQ1A0420	INFOSYS	HRD/1003475358/22-23 & 22/06/2022
20	EADA BAAVYA REDDY	18KQ1A0421	WIPRO	23881875&4/4/2022
21	GONA SREELATHA	18KQ1A0422	WIPRO	24207222&4/4/2022
22	GUDDANTI GOWTHAMI	18KQ1A0424	TOLLPLUS	07-01-2022
23	GUNJI JEEVANA JYOTHI	18KQ1A0425	WIPRO	22992664&18/1/2022
24	GURAKA LEELA BHRAMARAMBA	18KQ1A0426	TOLLPLUS	07-01-2022
25	KAKARLA SUPRAJA	18KQ1A0427	TCS	TCS/DT20218205761 & 14-11-2021
26	MEKAPOTHULA SIREESHA	18KQ1A0430	WIPRO	23071760&24/1/2022
27	PIGILI KAVITHA	18KQ1A0431	WIPRO	23071489&5/4/2022
28	RAVVA PRAVALLIKA	18KQ1A0432	INFOSYS	HRD/3T/1003402134/22-23 & 23/06/2022
29	SANNAMURI VIJAYA DURGA	18KQ1A0433	HCL	19/08/2022
30	SHAIK AFREEN	18KQ1A0434	DXC	08-12-2022
31	BANDARU NAGA SAI SUMANTH	18KQ1A0439	WIPRO	22991875&14/01/2022
32	BANDARU RAMAKRISHNA	18KQ1A0440	WIPRO	23283417&25/03/2022
33	BANDIKANTI AVINASH	18KQ1A0441	HCL	16/09/2022
34	BATTULA SATYANARAYANA	18KQ1A0442	WIPRO	24108940&24/3/2022
35	BHIMAVARAPU VENKATA SIVA	18KQ1A0443	TOLLPLUS	07-01-2022
36	BOLE ARAVIND	18KQ1A0444	WIPRO	22999840&24/01/2022
37	CHILUKURI GANESH	18KQ1A0446	MPHASIS	MPHTH_CD2022-0800
38	CHIPURUPALLE PAWAN KALYAN	18KQ1A0447	WIPRO	22840017&14/01/2022
39	CHUNCHU NAVEEN	18KQ1A0448	JOBIAK	02-02-2022
40	GANGIREDDY HARSHAVARDHAN REDDY	18KQ1A0451	WIPRO	22999434&24/01/2022
41	ILLURI RAMI REDDY	18KQ1A0453	WIPRO	22997284&24/01/2022
42	KARNA HARIKRISHNA	18KQ1A0457	WIPRO	24108053&22/03/2022
43	AVISA HARI BABU	18KQ1A0458	HCL	23/09/2022
44	KOPERLA DEEVEN KUMAR	18KQ1A0459	WIPRO	24143560&25/03/2022
45	CHAKKA MEGHANA	18KQ1A0461	JOBIAK	16/2/2022
46	DALA NAGA LAKSHMI SOWJANYA	18KQ1A0462	HCL	09-02-2022
47	GAJULAPALLI RUCHITHA	18KQ1A0463	HCL	10-10-2022
48	CHERUKURI RAGHAVENDRA SAI NADH BABU	18KQ1A0464	HCL	09-03-2022
49	IKKURTHI VENKATAGOPI CHANDANA	18KQ1A0465	HCL	23/09/2022
50	KAKARLA INDU	18KQ1A0467	ADP	25/3/2022
51	KAKUMANU KAVYA	18KQ1A0468	TCS	TCSL/DT20218160371 & 13/11/2021
52	KANDULA JALAMMA	18KQ1A0469	WIPRO	22994647&24/01/2022
53	KAPURAM LAVANYA	18KQ1A0471	DXC	07-08-2022
54	KATTA KAVYA	18KQ1A0472	DXC	07-08-2022
55	KONIDALA SOWMYA	18KQ1A0475	HCL	15/08/2022
56	LAKKU MADHURI	18KQ1A0476	WIPRO	24894010&25/04/2022
57	MALLAVARAPU BLESSIE SHAKHINA	18KQ1A0477	WIPRO	22284623&18/01/2022
58	MEDABALIMI NANDHINI	18KQ1A0479	HCL	27/07/2022

59	MODADUGU ANJANI	18KQ1A0481	MPHASIS	MPHTH_CD2022-0797
60	MOTE RAMYA	18KQ1A0483	HCL	09-02-2022
61	MYLA SRI LAKSHMI	18KQ1A0485	TCS DIGITAL	TCSL/DT20218180890 & 10/11/2021
62	MYLA SRICHANDANA	18KQ1A0486	WIPRO	241999434&14/01/2022
63	NARAHARI LALITHAMBA	18KQ1A0488	TOLLPLUS	07-01-2022
64	PASUPULETI SAI JAHNAVI	18KQ1A0490	ADP	24/2/2022
65	RAVILLA AKHILA	18KQ1A0491	WIPRO	22994642&23/1/2022
66	SIRIMALLA DHANALAKSHMI	18KQ1A0492	WIPRO	241508056&25/03/2022
67	YANNAGIRI SUPRIYA	18KQ1A0495	WIPRO	23285270&24/1/2022
68	PERUMALLA THANUJA	18KQ1A0496	WIPRO	24412336&21/04/2022
69	KODURI THARUN	18KQ1A0498	TOLLPLUS	07-01-2022
70	KOTU VENKATA GURU SWAMY	18KQ1A0499	INFOSYS	HRD/3T/1003402876/22-23 & 23/06/2022
71	KUPPALA UDAYCHAND	18KQ1A04A0	TCS DIGITAL	TCSL/DT20218072429 &10/11/2021
72	MADDELA BHANU SAI	18KQ1A04A2	WIPRO	24847116&25/03/2022
73	MADDIRALA ISAAC	18KQ1A04A3	DXC	08-12-2022
74	MANDALA VIJAY KUMAR	18KQ1A04A5	DXC	05-11-2022
75	MINDA SURESH	18KQ1A04A7	WIPRO	22998117&13/7/2022
76	MODIBOYINA SAI TARUN KUMAR	18KQ1A04A8	KPIT	30/3/2022
77	NAKKA MEGHA SYAM	18KQ1A04A9	HCL	23/09/2022
78	NAKKALA SANTHI RAJU	18KQ1A04B0	WIPRO	22999118&2/2/2022
79	NANDI PAVAN KUMAR	18KQ1A04B2	HCL	10-12-2022
80	NIDAMANURI PAVAN KUMAR	18KQ1A04B3	TCS	TCSL/DT20218210826 & 12-11-2021
81	PASAM ANAND	18KQ1A04B4	HACKWITHINTY	HRD/COV/1004300759/21-22 &14/06/2022
82	SOMISETTI VENKATA SAI NAGESH KUMAR	18KQ1A04B5	WIPRO	229981433&22/01/2022
83	GADHAMSETTY VEERA VENKATA SAI PHANIKUMAR	18KQ1A04B6	CAPGEMINI	1586360 & 27/3/2022
84	PIRLA HEMANTH KUMAR	18KQ1A04B7	WIPRO	24413336&21/04/2022
85	PULAGARA MADHU BABU	18KQ1A04B8	TCS	TCSL/DT20218210274 & 14/11/2021
86	SHAIK VAMSI KRISHNA	18KQ1A04B9	TCS DIGITAL	TCSL/DT20218072634 & 11/05/2022
87	AKULA HEMASRI	18KQ1A04C2	HCL	22/09/2022
88	GUMMA BINDU GAYATHRI	18KQ1A04C3	DXC	26/05/2022
89	JASMIN SHAIK	18KQ1A04C4	HCL	10-08-2022
90	MASABHAKTUNI LAKSHMI PRAVALLIKA	18KQ1A04C5	ENERGY TECH GLOBAL	29/12/2021
91	MEEDHURI KAVYA	18KQ1A04C6	HCL	15/08/2022
92	NANDYALA ABHISAARIKA	18KQ1A04C7	TCS	TSCL/DT20218155692 & 12/11/2021
93	NASIKA SRAVANI	18KQ1A04C8	DXC	08-12-2022
94	PANDITI CHANDRA LEKHA	18KQ1A04D1	HCL	09-02-2022
95	PATNAM JAYASRI	18KQ1A04D3	JOBIAK	02-02-2022
96	RACHAGARLA PRATHYUSHA	18KQ1A04D4	HCL	22/09/2022
97	SANIKOMMU SRAVYA	18KQ1A04D5	HCL	25/1/2022
98	SHAIK ARIFA	18KQ1A04D6	ZEMOSO	03-06-2022
99	SHAIK FATHIMA	18KQ1A04D7	HCL	23/09/2022
100	SWARNA MOUNIKA	18KQ1A04D8	TCS	TCSL/DT20218203120 &12/11/2021
101	VADAPALLI LALITHYA	18KQ1A04E2	DXC	10-06-2022
102	VANKAYALAPATI VAMSI	18KQ1A04E4	WIPRO	23002183&22/01/2022
103	BATTU GOPI KRISHNA	18KQ1A04E9	DXC	05-11-2022
104	GADAMSETTY VENKATA SAI YESWANTH KUMAR	18KQ1A04F0	HCL	10-10-2022
105	GUTHI GOPI CHAND	18KQ1A04F1	HCL	23/09/2022
106	KANCHARLA VENKATA VEERENDRA CHARI	18KQ1A04F2	WIPRO	23003183&11/3/2022
107	KODIAN SURYA	18KQ1A04F3	HCL	09-02-2022
108	MOHAMMAD ABDUL RAHAMAN	18KQ1A04F5	WIPRO	23021999&22/03/2022
109	MOTE KUMARA SWAMI	18KQ1A04F6	HCL	10-10-2022
110	RAVILLA VENKATA SRINIVAS	18KQ1A04F7	NALSOFT	18/3/2022
111	RAVULAPALLI VENKATA SUBBARAO	18KQ1A04F9	INFOSYS	HRD/3T/1003335186/22-23 & 23/06/2022
112	SANNAMURI SRI VENKATA YATISH CHANDRA	18KQ1A04G1	INFOSYS	HRD/1003475217/22-23 & 22/06/2022
113	SHAIK MASTAN VALI	18KQ1A04G2	SOPRA STERIA	22-03-2022
114	SIVARATHRI BRAHMAIAH	18KQ1A04G5	DXC	09-06-2022
115	TANNERU SHANMUKHA	18KQ1A04G7	SOPRA STERIA	22-03-2022
116	TANNIRU SAI KIRAN	18KQ1A04G8	WIPRO	229891433&29/03/2022
117	THATITHOTI AKHIL	18KQ1A04G9	DXC	26/05/2022

118	UPPUTURI SIVAKRISHNA	18KQ1A04H2	WIPRO	241090414&13/7/2022
119	YEDLURI SIVA KUMAR	18KQ1A04H5	HCL	10-10-2022
120	BALARAJU GEETHANJALI	18KQ1A04I1	ZF INDIA PVT.LTD	44508 & 08/10/2022
121	SURAM AKHILA	19KQ5A0402	EXOTIC MILE PVT.LTD	CINU51505DL2020PTC371971& 22/09/22
122	SOMISETTY SOWMYA SRI	19KQ5A0407	ADP	01-10-2022
123	YANAMANDRA MANI SWATHI PRIYANKA	19KQ5A0408	JOBIAK	16/2/2022
124	VUMMITI NAGA PRATHYUSHA	19KQ5A0409	HCL	22/09/2022
125	NUKALA VIJAYALAKSHMI	19KQ5A0411	WIPRO	231080425&18/01/2022
126	SHAIK ARIF	19KQ5A0414	JOBIAK	16/2/2022

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S.No	Student Name	Enrollment No	Employee Name	Appointment No
1	BODDU NAGAMALLESWARI	17KQ1A0403	ACCENTURE	C9774070 & 16/07/2021
2	BODEMPUDI NAGA BHARGAVI	17KQ1A0404	INFOSYS	HRD/3T/1002023126/21-22 & 13/08/2021
3	BUSSAREDDY CHARISHMA	17KQ1A0405	ACCENTURE	C10784753 & 07/02/2022
4	CHALLA SANDHYA	17KQ1A0406	Cognizant	20458074 & 03/03/2022
5	GANJI NANDINI	17KQ1A0407	ACCENTURE	C9774070 & 16/07/2021
6	GOLLAPOTHU HARIKA	17KQ1A0408	INFOSYS	HRD/3T/1002024657/21-22 & 13/08/2021
7	KALIKI NAVYA	17KQ1A0409	INFOSYS	HRD/3T/1002023105/21-22 & 13/08/2021
8	KANAMARLAPUDI LAKSHMI SUVARNA	17KQ1A0410	CAPGEMINI	5320548/1073652 & 21/12/2021
9	KELLETI VENKATA SATYA VANI	17KQ1A0411	ACCENTURE	C9885163 & 10/08/2021
10	KONIDALA MAMATHA	17KQ1A0412	MINDTREE	TN/80029520/22 & 20/2/2022
11	MADDISETTY NIHARIKA	17KQ1A0413	INFOSYS	HRD/3T/1002635313/21-22 & 19/11/2021
12	MOHAMMED BHANU	17KQ1A0414	CSS CROP	30/12/2021
13	NALAMOLU JAHNAVI	17KQ1A0416	Cognizant	20458058 & 03/03/2022
14	PAPPU SAI SOWMYA	17KQ1A0418	CAPGEMINI	5320556/1073478& 21/12/2021
15	PEYYALA SIRISHA	17KQ1A0419	CAPGEMINI	5320584/1073782 & 21/12/2021
16	PUTTAMRAJU TEJASWANI	17KQ1A0420	HCL	14-09-2021
17	SADHU LAKSHMI SRAVANTHI	17KQ1A0421	TCS	TCS/DT20206473480/HYDERABAD & 11/01/2022
18	SAMMISETTY NAGA JYOTSNA	17KQ1A0423	WIPRO	21031850 & 06/12/2021
19	SHAIK SAMEERA	17KQ1A0424	WIPRO	21028029 & 17/9/2021
20	VADLAMUDI PRATHYUSHA	17KQ1A0425	TCS	TCSL/DT20218388277/Ahmedabad & 04/12/2021
21	VATUPALLI PALAVENI	17KQ1A0426	WIPRO	20998952 & 13/9/2021
22	VEERAPANENI NANDINI	17KQ1A0427	ACCENTURE	C10144701 & 22/09/2022
23	YARAMALA KOTESWARI	17KQ1A0428	HCL	10-08-2021
24	BANDI PRASAD	17KQ1A0431	Cognizant	16668236 & 27/08/2021
25	BANDLA AMARANADH	17KQ1A0432	TCS	TCSL/DT20219272892/Lucknow & 09/02/2022
26	BIRUDULA NAGARAJU	17KQ1A0433	ACCENTURE	C9828463 & 29/07/2021
27	CHATARAJUPALLI HEMANTH KUMAR	17KQ1A0434	ACCENTURE	C9783256 & 19/07/2021
28	DAGGUBATI HARISH BABU	17KQ1A0436	MINDTREE	TN/80030418/22 & 22/4/2022
29	GONU SIVANNARAYANA	17KQ1A0438	CAPGEMINI	5320563/1073685& 21/12/2021
30	GUNDA NAVEEN	17KQ1A0440	TCS	TCSL/DT20219272892/Lucknow & 09/02/2022
31	GUNTHA ASHOK KUMAR REDDY	17KQ1A0441	TCS	TCSL/DT20219250915/Hyderabad & 24/01/2022
32	JAMANDLAMUDI DILEEP KUMAR	17KQ1A0442	MINDTREE	TN/80025569/22 & 6/1/2022
33	KONANKI SAI MANIKANTA	17KQ1A0444	CSS CROP	30/12/2021
34	KURAPATI SAMPATH KUMAR	17KQ1A0446	Cognizant	16668383 & 27/08/2021
35	PAMURI VENKATESWARLU	17KQ1A0447	HCL	01-12-2022
36	PATAN MOHAMMED NOOR ALAM KHAN	17KQ1A0449	ACCENTURE	C9918569 & 18/08/2021
37	REGADI RAMAKRISHNA	17KQ1A0450	TCS	TCSL/DT20219226321 & 30/12/2021
38	THANNEERU ANIL KUMAR	17KQ1A0456	WIPRO	13-09-2021
39	VELPULURI MUNEERBASHA	17KQ1A0459	CAPGEMINI	5320568/1073367 & 21/12/2021
40	BANDARU ASHA	17KQ1A0462	WIPRO	21020743 & 10/9/2021
41	BODDAPATI APARNA	17KQ1A0464	WIPRO	20986611 & 4/7/2021
42	CHALLA ANITHA	17KQ1A0465	WIPRO	21022634 & 10/9/2021
43	DASARI SOBHA RANI	17KQ1A0466	INFOSYS	HRD/3T/1003072934/21-22 & 30/12/2021
44	DHARANIKOTA NITHEESHA	17KQ1A0467	INFOSYS	HRD/3T/1002307878/21-22 & 30/12/2021
45	DWARAKACHARLA DEEPTI	17KQ1A0469	ACCENTURE	C10007929 & 26/08/2021
46	GANAKANAPALLI NIHARIKA	17KQ1A0470	TCS	TCSL/DT20206529803 & 11/03/2021
47	GATTU JYOTHSNA	17KQ1A0471	WIPRO	21023982 & 29/8/2021
48	GONUGUNTA NEERAJA	17KQ1A0472	TCS	TCSL/DT20206522562/Hyderabad & 11/03/2021
49	KOMMISETTY DAEDEEPYA	17KQ1A0473	CAPGEMINI	5320367/1073584& 21/12/2021
50	M SAHITHI	17KQ1A0475	Cognizant	16274075 & 26/08/2021
51	MAGISETTI PUSHKARA SAI	17KQ1A0476	Cognizant	16668223 & 27/08/2021
52	PASALA AKHILA	17KQ1A0479	TCS	TCS/DT20206890729/HYDERABAD & 11/03/2021
53	SAVALAM PALLAVI	17KQ1A0481	ZF India Private Limited	25699 & 25/04/2022
54	SHAIK KARIMUNNISA	17KQ1A0483	TCS	TCSL/DT20206529914 & 6/09/2021
55	SHAIK MUSRATH SULTANA	17KQ1A0484	ACCENTURE	C9929164 & 20/08/2021
56	TALAMANCHI SRAVANI	17KQ1A0485	TCS	TCSL/DT20219356990/Chennai & 27/01/2022
57	THELLA SMYLEE PRIYANKA	17KQ1A0487	INFOSYS	HRD/3T/1002135628/21-22 & 25-10-2021

58	THOTA SAI SUPRIYA	17KQ1A0488	INFOSYS	HRD/3T/1003058939/21-22 & 19-01-2021
59	UPPALA RAJA VENKATA PAVANI	17KQ1A0489	INFOSYS	HRD/3T/1002635346/21-22 & 19-11-2021
60	VAKKALAGADDA VENKATA RAMYA SRI	17KQ1A0490	CSS CROP	30/12/2021
61	BATHULA CHANDRA	17KQ1A0492	TCS	TCSL/DT20218388238/Ahmedabad & 04-12-2021
62	BIJIVEMULA VENKATA SURENDRA	17KQ1A0493	TCS	TCSL/DT20219126557/Lucknow & 21-12-2021
63	GUMMADIDALA VENUBABU	17KQ1A0498	CAPGEMINI	5320554/1073696& 21/12/2021
64	KOSURI YASWANTHKUMAR	17KQ1A04A3	TCS	" TCSL/DT20219383968/Chennai & 27-01-2022 "
65	MUKKALA VIJAYA RAMA KRISHNA DHANUSH	17KQ1A04A5	WEST AGILE LAB	19/8/2021
66	MUPPURI ASHOKKUMAR	17KQ1A04A7	CAPGEMINI	5320592/1073827& 21/12/2021
67	PATTAN BAJIBABU	17KQ1A04B0	TCS	TCSL/DT20219272856/Lucknow & 09-02-2022
68	SHAIK KHALID	17KQ1A04B4	DXC	27/09/2021
69	VADAPALLI VENKATA SAI KARTHEEK	17KQ1A04B7	INFOSYS	HRD/3T/1002482206/21-22 & 16-11-2021
70	VESAPOGU KALYAN	17KQ1A04B8	ZENSAR	0082896_89/1749747 & 09-02-2022
71	AKULA HEMA	17KQ1A04C1	MINDTREE	TN/80030426/22 & 22/4/2022
72	BOMMINENI LAKSHMICHAITANYA	17KQ1A04C2	ACCENTURE	C9783265 & 19-07-2021
73	DASARI SAI LAKSHMI PRASANNA	17KQ1A04C5	TCS	TCSL/DT20217654526/Chennai & 08-12-2021
74	DIL SANA SULTHANA SHAIK	17KQ1A04C6	INFOSYS	HRD/3T/1002025986/21-22 & 19-10-2021
75	GADE SUSHMA PRIYA	17KQ1A04C7	CSS CROP	30/12/2021
76	GORANTLA VENKATA MAMATHA	17KQ1A04C8	Cognizant	16274364 & 26-08-2021
77	GUDIMITLA LASYA TEJASWI	17KQ1A04C9	CSS CROP	30/12/2021
78	IDAVALAPATI PRASANNA	17KQ1A04D0	WIPRO	07-03-2021
79	INDLA PAVITHRA	17KQ1A04D1	INFOSYS	HRD/3T/1002135619/21-22 & 25-10-2021
80	KAMMA RADHAMADHAVI	17KQ1A04D3	WIPRO	20952990 & 13/9/2021
81	KASUKURTHI VASANTHA MEGHANA	17KQ1A04D5	TCS	TCSL/DT20219152493/Ahmedabad & 27-12-2021
82	MALLAVARAPU MADHUSHA	17KQ1A04D7	ACCENTURE	C10144754 & 22/09/2022
83	NALLURI KAVYA RUPA	17KQ1A04D8	INFOSYS	HRD/3T/1002024557/21-22 & 13-08-2021
84	PANTHAGANI MANEESHA	17KQ1A04D9	CAPGEMINI	5321575/1099296 & 21-12-2021
85	POMKAM VENKATA MOUNIKA	17KQ1A04E1	TCS	TCSL/DT20221001216/Lucknow & 24-02-2021
86	RACHAKUNTA TEJASWI	17KQ1A04E2	ACCENTURE	C10784723 & 07-02-2022
87	SADHU LEELA MADHURI	17KQ1A04E3	ACCENTURE	C9783258 & 19-07-2021
88	SANGEETHA GOLLAPATI	17KQ1A04E4	HCL	HCL/TSS-NOI/1221/035 & 20-12-2021
89	SHAIK FARZANA	17KQ1A04E5	ZENSAR	0082896_97/1749787& 09-02-2022
90	SIMBOTHULA SANDHYA	17KQ1A04E6	TCS DIGITAL	TCSL/DT20206473325/Hyderabad & 11-03-2021 TCSL/DT20206522535/Hyderabad & 11-03-2021 22464442 & 7/12/2021 17/5/2021
91	SINIGEPALLI SUDHA LAKSHMI	17KQ1A04E7	TCS	TCSL/DT20206522535/Hyderabad & 11-03-2021
92	THONDAMALLI NAGATULASI	17KQ1A04E9	WIPRO	22464442 & 7/12/2021
93	VIJAYA LAKSHMI LINGAMPALLI	17KQ1A04F0	GLOBAL EDGE	17/5/2021
94	CHALLAPALLI SRIHARI	17KQ1A04F1	ACCENTURE	C9929144 & 20-08-2021
95	GANNAVARAPU ANVESH KANCHARLA MOHANRAJ KUMAR	17KQ1A04F5	ACCENTURE	C9828413 & 29-07-2021
96	KANCHARLA MOHANRAJ KUMAR	17KQ1A04F8	TCS DIGITAL	C9929146 & 20-08-2021
97	KONDA ANIL KUMAR REDDY	17KQ1A04G3	TCS	TCSL/DT20217654738/Chennai & 08-12-2021
98	MANAM ASHOK	17KQ1A04G7	TCS	TCSL/DT20219226357& 30-12-2021
99	MUTHIKEPALLI MOHAN REDDY	17KQ1A04G9	LTC INFOTECH	Appt/I3L/Campus/644/2021-2022 & 12-02-2022
100	REKHAPALLI NAGA BHUVANESWARARAO	17KQ1A04H1	Cognizant	16668262 & 27-08-2021
101	SARLA SAI CHARAN	17KQ1A04H3	Cognizant	16668243 & 27-08-2021
102	THOTA SAITEJA	17KQ1A04H5	INFOSYS	HRD/3T/1002482214/21-22 & 16-11-2021
103	TUMMALA SUNEEL	17KQ1A04H6	Cognizant	17785113 & 03-08-2021
104	YELIKA DINESH BABU	17KQ1A04H9	TCS	TCSL/DT20217654502/Chennai & 08-12-2021
105	BOCHU MALLIKARJUNA	17KQ1A04I1	TCS	TCSL/DT20229574493/Lucknow & 20-01-2022
106	INTURI DHARANI	18KQ5A0401	ACCENTURE	C10144787 & 22/09/2022
107	PIRLA ALEKHYA	18KQ5A0403	HCL	14/9/2021
108	SAVALAM DIVYA NAGA BHARGAVI	18KQ5A0404	INFOSYS	HRD/3T/1003072955/21-22 & 30-12-2021
109	MEDIKONDA JAYAKRISHNA	18KQ5A0406	TCS	TCSL/DT20229793554/1796381/Pune & 09-03-2022
110	KONDAKAMARLA MUBARAK	18KQ5A0413	WIPRO	22721567 & 6/12/2021
111	MAYANA EZAZ KHAN	18KQ5A0415	TCS	TCSL/DT20218559889/Chennai & 20-12-2021
112	NANDAM LALITHA	18KQ5A0419	TCS	TCSL/DT20218452135/Lucknow & 14-01-2022
113	SINGAMSETTY HEMA LATHA	18KQ5A0421	TCS	TCSL/DT20222006291/Lucknow & 05-03-2022

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S.No	Student Name	Enrollment No	Employee Name	Appointment No
1	BILLA BHARGAVI	16KQ1A0401	Syrma Technologies	29/8/2019
2	DIDDI SWAPNA	16KQ1A0404	GridX	13/09/2019
3	MUPPURI VENKATA SWAROOPA	16KQ1A0409	Hyoseong	29/02/2019
4	NEKKANTI SYAMALA DEVI	16KQ1A0411	TCS	TCSL/DT20195380585 & 13/09/2020
5	PALLAPATLA DIVYA	16KQ1A0413	Tech Mahindra	2028184/ELTP-CAMPUS/2020 & 15/12/2020
6	PANEM SRAVANI	16KQ1A0415	Syrma Technologies	29/8/2019
7	PATTAN JAREENA	16KQ1A0416	IBM	24/9/2019
8	PENUBAKU MANISHA	16KQ1A0417	Syrma Technologies	29/8/2019
9	POONDLA SAIDHARANI	16KQ1A0419	Wipro	9403342&19/6/2020
10	PURNAGANTI NADIYA	16KQ1A0420	Infosys	HRD/3T/1000543470/19-20 & 16/12/2019
11	SHAIK AFREEN	16KQ1A0424	Wipro	9400887&19/6/2020
12	SHAIK KOUSAR	16KQ1A0425	Globaledge	17/5/2020
13	ALURI GOPI	16KQ1A0428	Genpact	17/1/2020
14	DIVVELA SURYA TEJA	16KQ1A0435	TCS	TCSL/DT20184308115 & 13/09/2019
15	KAKUMANU HEZEKIAH	16KQ1A0440	Accenture	C9355472 & 16/09/2020
16	KALISETTY UGRA NARASIMHA	16KQ1A0441	HCL	02-01-2021
17	KOMMIREDDY VENKATA RAJA	16KQ1A0442	HCL	26/2/2021
18	KONDAPALLI MURALI KRISHNA	16KQ1A0443	Buddihealth	21-08-2019
19	MODADUGU SAI RAMANJANEYULU	16KQ1A0449	TCS	TCSL/DT20195359864 & 13/09/2019
20	NAKKA SREE RAM	16KQ1A0451	Nalsoft	03-08-2020
21	NEELA BHANU PRAKASH	16KQ1A0452	Preludesys	HRD/OFFR/303/40479 & 06/8/2020
22	ULLI VENKATESWARLU	16KQ1A0457	Genpact	17/1/2020
23	UPPUGUNDURI SAITEJASWI	16KQ1A0458	Mindtree	TN/80012308/19 & 30/10/2019
24	VATHALA UTHAMA SAI REDDY	16KQ1A0460	HCL	02-01-2021
25	BODAPATI BHAGYA LAKSHMI	16KQ1A0462	Syrma Technologies	29/8/2019
26	BONTHA SUPRIYA	16KQ1A0463	Cognizant	14024466 & 28/01/2020
27	CHINTHAKRINDI LAKSHMIRAMYASAHITHI	16KQ1A0464	Nalsoft	03-08-2020
28	DOLA DIVYA	16KQ1A0467	Nichehands Technologies	02-12-2020
29	JANJANAM V. T. SUREKHA	16KQ1A0470	Hyoseong	29/02/2019
30	JATLA MONIKADEVI	16KQ1A0471	Hyoseong	29/02/2019
31	JAVVAJI GAYATHRI	16KQ1A0472	Infosys	HRD/3T/1000543452 /19-20& 16/12/2019
32	MAMIDALA SRUTHIMADHURI	16KQ1A0474	Syrma Technologies	29/8/2019
33	MANCHA ANJALI	16KQ1A0475	TCS	TCSL/DT20195380565 & 13/09/2020
34	MANCHIKALAPATI ANUSHA	16KQ1A0476	Cognizant	14024507 & 28/01/2020
35	MANNAM MADHURI	16KQ1A0477	Cognizant	14024510 & 28/01/2020
36	PANDITI ANUSHA	16KQ1A0479	TechMahindra	2028256/ELTP-CAMPUS/2020 & 15/12/2020
37	SIDDAMURTHY SOWMYA	16KQ1A0484	Syrma Technologies	29/8/2019
38	SINGAMPALLI V.N. TEJASWI	16KQ1A0485	Syrma Technologies	29/8/2019
39	VANKAYALA LAKSHMI SRAVANI KUMARI	16KQ1A0486	Jaaji Technologies	02-07-2020
40	VENNA SOWJANYA	16KQ1A0487	Hyoseong	29/02/2019
41	VIGNAM BEAULA JYOTHI	16KQ1A0488	Syrma Technologies	29/8/2019
42	ATURI RAJESH HANANEEEL	16KQ1A0490	Sutherland Global	03-09-2020
43	GUDLADONA SRINIVAS	16KQ1A0497	Sutherland Global	03-09-2020
44	GUNJI AJAY KUMAR	16KQ1A0498	Wipro	9400863&19/6/2020
45	KOLAKALURI PRAJWAL SANKAR	16KQ1A0499	Genpact	17/1/2020
46	MUCHUMARI SRINIVASA REDDY	16KQ1A04A0	HCL	02-01-2021
47	MUCHUMARI SRINIVASA REDDY	16KQ1A04A4	GridX	02-01-2021
48	MULE SURYA CHARAN REDDY	16KQ1A04A5	GridX	13/09/2019
49	NUTHALAPATI VENKATA NAVEEN	16KQ1A04A7	Nalsoft	03-08-2020
50	PODILI ARUNKUMAR	16KQ1A04A8	Worksbot Applications	20/7/2019
51	SHAIK NAGOOR BABA	16KQ1A04B1	Worksbot Applications	20/7/2019
52	SHAIK SUBHANI	16KQ1A04B2	Cognizant	14024548 & 28/01/2020
53	SHAIK SULTHAN SUHEL	16KQ1A04B3	Hyoseong	29/02/2019
54	SINGAMNENI SASIKIRAN	16KQ1A04B4	Capgemini	4472852/1235483 & 18/10/2020
55	SIRIMALLA SATISH	16KQ1A04B5	Sutherland Global	03-09-2020
56	TULLURI VAMSI	16KQ1A04B8	Capgemini	4472437/1235548 & 18/10/2020
57	DIVYA SUDHA KUNJETI	16KQ1A04C4	Syrma Technologies	02-01-2021
58	DODLA LAHARI	16KQ1A04C5	Syrma Technologies	29/8/2019

59	JANGLI VIVEDA	16KQ1A04C8	Nichehands Technologies	02-12-2020
60	KALE SAI VARDHINI	16KQ1A04D0	Syrma Technologies	29/8/2019
61	MOTUPALLI JAHNAVI	16KQ1A04D7	Wipro	9400876&19/6/2020
62	NALABOLU VIDYA SAI LAKSHMI	16KQ1A04D9	Tech Mahindra	2028387/ELTP-CAMPUS/2020 & 15/12/2020
63	NUKATHOTI GEETHA	16KQ1A04E1	Buddihealth	21-08-2019
64	NUKATHOTI KAVYA CHANDRIKA	16KQ1A04E2	Hyoseong	29-02-2019
65	PABBISETTY NAVYA SRI	16KQ1A04E3	Accenture	C9355472 & 03/10/2020
66	SURA RADHA	16KQ1A04E6	Hyoseong	29-02-2019
67	TANGA PRAVALLIKA	16KQ1A04E7	Cognizant	14024552 & 28/01/2020
68	VEMULA MODAKA LAKSHMI SAMYUKTHA	16KQ1A04E9	Genpact	17/1/2020
69	VULCHI MOUNYA	16KQ1A04F0	Cognizant	14024560 & 28/01/2020
70	ANNA JAGADEESH	16KQ1A04F1	Genpact	17/1/2020
71	AVULA BALANJANEYULU	16KQ1A04F3	TCS	TCSL/DT20195359673 & 13/09/2019
72	BHUPATHI GOPI	16KQ1A04F4	Pivox Lab	28/9/2019
73	BOJJA JAYA DEV	16KQ1A04F5	JustDial	19/2/2020
74	BORRAJU VENKATA RAVINDRA BABU	16KQ1A04F6	Worksbot Applications	20/7/2019
75	CHINTHAGUNTLA VIJAYABABU	16KQ1A04F9	TechMahindra	2028343/ELTP-CAMPUS/2020 & 15/12/2020
76	DEVARAMPATI PAVAN KUMAR	16KQ1A04G2	Mindtree	TN/80013456/19 & 30/10/2019
77	INAGANTI AJAY KUMAR REDDY	16KQ1A04G6	JustDial	19/2/2020
78	MARTHALA RAMAKRISHNA REDDY	16KQ1A04H0	Worksbot Applications	20/7/2019
79	NARISETTY SRIKANTH	16KQ1A04H1	Hyoseong	29-02-2019
80	ORUGANTI VASU	16KQ1A04H3	Capgemini	4472746/1235735 & 18/10/2020
81	SIDDU MOTHILAL CHARI	16KQ1A04H6	Pivox Lab	28/9/2019
82	SINGAREDDY VENKATESWARA REDDY	16KQ1A04H7	HCL	02-01-2021
83	YALLANKI LEPAKSHI SRINIVAS BABU	16KQ1A04H8	Hyoseong	29/02/2019
84	SIGHAKOLLI TANMAI	16KQ1A04I1	IBM	24/9/2019
85	KRISTIPATI VIJAYALAKSHMI	16KQ1A04I3	HCL	02-01-2021
86	ATTANTI AKHILA	17KQ5A0402	Syrma Technologies	29/8/2019
87	CHUNDURI NEELIMA	17KQ5A0404	Syrma Technologies	29/8/2019
88	DARLA VIJAYA LAKSHMI	17KQ5A0405	Syrma Technologies	29/8/2019
89	NUTHAKKI AKHILA	17KQ5A0406	Syrma Technologies	29/8/2019
90	PEDAKADUPULA NARAYANAMMA	17KQ5A0407	Syrma Technologies	29/8/2019
91	SHAIK MAHABOONBI	17KQ5A0408	IBM	24/9/2019
92	GUNJI SRIHARI	17KQ5A0411	GridX	13/09/2019

4.5 Professional Activities (20) Tota

4.5.1 Professional societies/chapters and organizing engineering events (5)

A. Availability & activities of professional societies/chapters

IEEE

The Institute of Electrical and Electronics Engineers is a professional association for electronics engineering, electrical engineering, and other related disciplines with its corporate office in New York City and its operations center in Piscataway, New Jersey. The mission of the IEEE is advancing technology for the benfit of humanityy. The IEEE was formed from the amalgamation of the American Institute of Electrical Engineers and the Institute of Radio Engineers in 1963. To meet the objectives of IEEE, the regional Centres conduct varieties of programs like Seminars, Workshops, Conferences, Exhibitions, etc. throughout the year. These are at both National and International level.The Institute of Electrical and Electronics Engineers (IEEE) established student chapter with thedepartment of Electronics and Communication Engineering, PACE Institute of Technology & Sciences from September 2021.Thedepartment of Electronics and Communication Engineering, PACE Institute of Technology & Sciences is an active member of IEEE. The faculty members and students are actively involved in conducting and attending professional events to enhance the skills.

IETE

The Institution of Electronics and Telecommunication Engineers is a India's leading recognized professional society devoted to the advancement of science, technology, electronics, telecommunication and information technology. Founded in 1953, it serves more than 70,000+ members through 60+ centers/sub centers primarily located in India(3 abroad). The Institution provides leadership in scientific and technical areas of direct importance to the national development and economy. Thedepartment of Electronics and Communication Engineering, PACE Institute of Technology & Sciences is an ac member of IETEThe Institution of Electronics and Telecommunication Engineers (IETE)established student chapter with thedepartment of Electronics and Communication Engineering, PACE Institute of Technology & Sciences from Octomber 2015.The faculty members and students are actively involved in conducting and attending professional events to enhance the skills.

Consolidated list of events conducted

S.No	Academic Year	Student Chapter	No. Of Events
1	2022-23	IEEE	11
		IETE	6
2	2021-22	IEEE	9
		IETE	5
3	2020-21	IETE	11
4	2019-20	IETE	10

A. Number, quality of engineering events (organized at institute) (LevelInstitute/State/National/International)

List of Guest lecturers/webinars conducted by the Department

Academic Year:-2022-23

1	16-08-2022	The Value of Joining IEEE and its Membership Benefits	Seminar	IEEE	67	Mr.M.Sai Prashanth Section Student Representative IEEE – Hyderabad Section
2	25-08-2022	Recent Trends in Antenna Design	Webinar	IEEE	103	Dr. P. Rajesh Kumar, Professor & HoD, AUCE(A), Andhra University
3	11-09-2022	Recent Trends in Communication and Signal Processing	Guest Lecture	IETE	64	Dr. K. Ravikumar, Professor, NSRIT Vizag.
4	24-09-2022	Low Power VLSI	Webinar	IEEE	48	Dr. M. Ashok Kumar, Professor, Pydah engineering college
5	14-10-2022	Introduction to AI & ML	Seminar	IEEE	79	Dr. D.Anil Kumar, Asst.Professor,PACE IT&S, Ongole
6	28-10-2022	Introduction to MEMS	Webinar	IEEE	53	Dr. R. Satish Babu, Associate Professor CR Reddy Engg.College, Eluru
7	18-11-2022	Modern Communications	Webinar	IETE	47	Dr. Y. Chalapathi Rao, Professor, VNR Vignan Jyothi, Hyd
8	30-11-2022	Recent Trends in Bio-Medical Engineering	Webinar	IEEE	93	Mrs. K. Hima Bindu, Assistant Professor, Vigan University
9	13-12-2022	Recent Trends in Sensor Networks	Webinar	IETE	69	Mr. D. Avinash Babu, Scientific Assistant, IMD
10	29-12-2022	MAT LAB in Image Processing	Seminar	IEEE	101	Dr. Venugopal Reddy, Professor & HoD, RISE Prakasam Engg.college, Ongole

11	07-01-2023	Recent Trends in VLSI	Seminar	IETE	83	Dr.G.Erna, Asst.Professor, PACE IT&S, Ongole
12	27-01-2023	Basic Electronics	QUIZ	IEEE	40	Dr.M.Raja Sekhar, IEEE SB Counselor
13	11-02-2023	Wartech-2k23	Talk on Latest Technology, PPTs, Poster Presentations	IEEE	139	Dr.B.RAJASEKHAR, Chairman, IETE Center, Vijayawada
14	27-02-2023	Communication Systems	QUIZ	IEEE	70	Dr. Md.Hayat Razvee, Professor, PBR VITS, Kavali
15	09-03-2023	How to Prepare Effective PPTs	Hands on Training	IETE	67	Dr.P.Udaya Bhaskar, Assistant Professor, PACEIT&S, Ongole
16	16-03-2023	Introduction to 5G	Webinar	IETE	53	Mr.A.Sambath Kumar, Sub divisional Engineer
17	24-03-2023	Application of Weather RADARs	Webinar	IEEE	79	Mr. D. Avinash Babu, Scientific Assistant, IMD

Academic Year:-2021-22

S No	Date	Name of the Event	Nature of the Event	Student Chapter	No. of Participants	Resource Person
1	16-11-2021	IEEE Inauguration	Guest Lecture	IEEE	50	Shri.M.Sai Kumar Tara, SAC Chairman
2	16-11-2021	The Value of Joining IEEE and its Membership Benefits	Seminar	IEEE	50	Mr.M.Sai Prashanth Section Student Representative IEEE – Hyderabad Section
3	29-11-2021	How to make best Power Point Presentation	Awareness Program	IETE	63	Dr.D.Anil Kumar, Asst.Professor,PACE IT&S, Ongole
4	18-12-2021	Natural Language Processing And Its Techniques	Webinar	IEEE	70	Mr.M.Teja Kiran Kumar, Cofounder, YatriSiksha Technologies Private Limited, Hyderabad.
5	27-12-2021	Introduction to 5G	Webinar	IETE	53	Mr.A.Sambath Kumar, Sub divisional Engineer, BSNL
6	05-01-2022	VLSI & Embedded Systems	Guest Lecture	IEEE	48	Dr. Himabindu, Professor & HoD, QISCET,Ongole
7	24-01-2022	Wireless Communications	Webinar	IETE	59	Dr. Md.Hayat Razvee, Professor, PBR VITS, Kavali
8	15-02-2022	Basic Electronics	QUIZ	IEEE	40	Dr.M.Raja Sekhar, IEEE SB Counselor
9	25-02-2022	Recent Trends in Bio-Medical Engineering	Webinar	IEEE	79	Mrs. K. Hima Bindu, Assistant Professor, Vigan University
10	08-03-2022	Communication Systems	Technical Quiz	IEEE	94	Dr.M.Raja Sekhar, IEEE SB Counselor
11	30-03-2022	Wireless Sensor Networks	Webinar	IETE	57	Mr. D. Avinash Babu, Scientific Assistant, IMD
12	30-03-2022	EXPLORE ML	Seminar	IEEE	64	Mr.Aneesahamed Baig Explore ML Facilitator in Google, Vijayawada
13	10-04-2022	General topics discussion	Debate	IEEE	30	Dr.M.Raja Sekhar, IEEE SB Counselor

14	22-04-2022	Recent Trends in Signal Processing	Guest Lecture	IETE	63	Dr. Venugopal Reddy, Professor & HoD, RISE Prakasam Engg.college, Ongole

Academic Year:-2020-21

S No	Date	Name of the Event	Nature of the Event	Student Chapter	No. of Participants	Resource Person
1	04-11-2020	Basic Communication Systems	Quiz	IETE	76	Dr.Sk.Subhani, Assistant Professor, PACEIT&S,Ongole
2	16-12-2020	Introduction to AI&ML	Webinar	IETE	51	Mrs. K. Hima Bindu, Assistant Professor, Vigan University
3	29-01-2021	How to make best Power Point Presentation	Hands on Practice	IETE	85	Dr.M.Rajasekhar, Asst.Professor, PACE IT&S, Ongole
4	18-02-2021	Recent Trends in Bio-Medical Engineering	Webinar	IETE	73	Dr. Y. Chalapathi Rao, Professor, VNR Vignan Jyothi, Hyd
5	15-03-2021	Recent Trends in Signal Processing	Guest Lecture	IETE	63	Dr. Venugopal Reddy, Professor & HoD, RISE Prakasam Engg.college, Ongole
6	30-03-2021	Trends in VLSI & Embedded Systems	Guest Lecture	IETE	48	Dr. Himabindu, Professor & HoD, QISCET,Ongole
7	28-04-2021	RADAR Applications	Webinar	IETE	57	Mr. D. Avinash Babu, Scientific Assistant, IMD
8	21-05-2021	Recent Trends in Bio-Medical Engineering	Webinar	IETE	79	Mrs. K. Hima Bindu, Assistant Professor, Vigan University
9	17-06-2021	Communication Systems	QUIZ	IETE	70	Dr. Md.Hayat Razvee, Professor, PBR VITS, Kavali
10	27-07-2021	Modern Communications	Webinar	IETE	47	Dr. Y. Chalapathi Rao, Professor, VNR Vignan Jyothi, Hyd
11	19-08-2021	Trends in Satellite Communications	Guest Lecture	IETE	64	Dr. K. Ravi Kumar, Professor, NSRIT Vizag.

Academic Year:-2019-20

S No	Date	Name of the Event	Nature of the Event	Student Chapter	No. of Participants	Resource Person
1	05-08-2019	Basic Electronics	Quiz	IETE	62	Dr.J.V.Anand, Asst.Professor,PACEIT&S, Ongole
2	11-09-2019	Recent Trends in Signal Processing	Guest Lecture	IETE	63	Dr. Venugopal Reddy, Professor & HoD, RISE Prakasam Engg.college, Ongole
3	30-09-2019	Modern Communication Systems	Webinar	IETE	41	Mr.A.Sambath Kumar, Sub divisional Engineer, BSNL
4	15-10-2019	Trends in VLSI & Embedded Systems	Quiz	IETE	44	Mr.N.Prakash Babu, Assistant Professor, PACEIT&S,Ongole
5	21-11-2019	How to make best Power Point Presentation	Hands on Practice	IETE	77	Dr.M.Sri Nagesh, Professor,PACE IT&S, Ongole
6	23-12-2019	Communication Systems	Technical Quiz	IETE	56	Mr.K.Sundeep, Asst.Professor, PACEIT&S,Ongole
7	20-01-2020	Trends in Bio-Medical Engineering	Guest Lecture	IETE	71	Mrs. K. Hima Bindu, Assistant Professor, Vigan University
8	11-02-2020	Low Power VLSI	Webinar	IETE	43	Dr. M. Ashok Kumar, Professor, Pydah engineering college

9	28-11-2020	MAT LAB in Communication Systems	Hands on Practice	IETE	59	Dr. R. Satish Babu, Associate Professor CR Reddy Engg.College, Eluru
10	19-11-2020	MAT LAB in Image Processing	Seminar	IETE	63	Dr. Venugopal Reddy, Professor & HoD, RISE Prakasam Engg.college, Ongole

4.4.2 Publication of technical magazines, newsletters, etc. (5)

Institute

Technical Magazines:

The department of Electronics and Communication Engineering, PACE ITS publishes magazines yearly once. In this magazines details regarding to Department Vision & Mission, Department Achievements, MoUs Signed by Department, List of Events conducted by department, Student Participations & Achievements, Faculty achievements and Toppers list are published.

S.No.	Academic Year		Issue No	Name of the Editor(s)
1	2019-2020	Yearly Magazine	01	Dr. M.Sri Nagesh (Professor) Mr. N.Prakash Babu(Assistant Professor) Koperla Deeven Kumar (II Year student), Thota Manohar (II Year student) Medikonda Jaya Krishna (III Year student), Kurapati Sampath Kumar (III Year student)
2	2020-2021		01	Dr. M.Sri Nagesh (Professor) Mr. P.Siva Krishna (Assistant Professor) Munagapati Purna Siva Mani Kanta (II Year student), Vadigineni Sasi Kiran (II Year student) Koperla Deeven Kumar (III Year student), Thota Manohar (III Year student)
3	2021-22		01	Dr . M.Raja Sekhar (Associate Professor) Mr. B.Srinivasa Ganesh (Assistant Professor) Dubbisetty Venkata Rohith (II Year student), Gudibandla Datta Sai Ganesh Reddy (II Year student) Munagapati Purna Siva Mani Kanta (III Year student), Vadigineni Sasi Kiran (III Year student)

Newsletters:

The department of Electronics and Communication Engineering, PACE ITS Publishes newsletters for every 3 months. In this newsletter details regarding to Department Achievements, MoUs Signed by Department, List of Events conducted by department, List of events participated by the students, Student interactions with Alumini members,Industrial persons etc., are published

Academic Year		Issue No	Name of the Editor(s)
2019-2020	Newsletter	01	Dr. M.Sri Nagesh (Professor) Medikonda Jaya Krishna (III Year student), Kurapati Sampath Kumar (III Year student)
		02	Dr. M.Sri Nagesh (Professor) Medikonda Jaya Krishna (III Year student), Kurapati Sampath Kumar (III Year student)
		03	Dr. M.Sri Nagesh (Professor) Medikonda Jaya Krishna (III Year student), Kurapati Sampath Kumar (III Year student)
		04	Dr. M.Sri Nagesh (Professor) Medikonda Jaya Krishna (III Year student), Kurapati Sampath Kumar (III Year student)
2020-2021		01	Dr. M.Sri Nagesh (Professor) Koperla Deeven Kumar (III Year student), Thota Manohar (III Year student)
		02	Dr. M.Sri Nagesh (Professor) Koperla Deeven Kumar (III Year student), Thota Manohar (III Year student)
		03	Dr. M.Sri Nagesh (Professor) Koperla Deeven Kumar (III Year student), Thota Manohar (III Year student)
		04	Dr. M.Sri Nagesh (Professor) Koperla Deeven Kumar (III Year student), Thota Manohar (III Year student)
2021-22		01	Dr . M.Raja Sekhar (Associate Professor) Munagapati Purna Siva Mani Kanta (III Year student), Vadigineni Sasi Kiran (III Year student)
		02	Dr . M.Raja Sekhar (Associate Professor) Munagapati Purna Siva Mani Kanta (III Year student), Vadigineni Sasi Kiran (III Year student)
		03	Dr . M.Raja Sekhar (Associate Professor) Munagapati Purna Siva Mani Kanta (III Year student), Vadigineni Sasi Kiran (III Year student)
		04	Dr . M.Raja Sekhar (Associate Professor) Munagapati Purna Siva Mani Kanta (III Year student), Vadigineni Sasi Kiran (III Year student)

4.4.3 Participation in inter-institute events by students of the program of study (10) Institute

The department of Electronics and Communication Engineering in PACE ITS encourages students to participate in various events taking place in our state and out of state. So many of our students performed well in the events and achieved good achievements in the events. The details of students partcipation in inter-institute events within the state and out of the state, Students achievements in inter-institute events within the state and out of the state in the cademic years 2021-22,2020-21,2019-18 are are mentioned below,

Students Participation (with in state/Other state)

S.No	Academic year	Total No. of Participation certificates	No. of participation certificates from with in the state	No. of participation certificates from other states
1	2021-22	384	306	78
2	2020-21	216	187	29
3	2019-20	171	153	18

Students Achievements (with in state/Other state)

S No	Academic year	Total No. of Achievement certificates	No. of Achievement certificates from with in the state	No. of Achievement certificates from other states
1	2021-22	77	63	14
2	2020-21	54	45	9
3	2019-20	46	39	7

5 FACULTY INFORMATION AND CONTRIBUTIONS (200) Total Ma

Sr. No	Name	PAN No.	University Degree	Date of Receiving Degree	Area of Specialization	Research Paper Publications	Ph.D Guidance	Faculty receiving Ph.D during the assessment year	Current Designation	Date (Designated as Prof / Assoc. Prof.)	Initial Date of Joining	Associati Type
1	Dr.J.Kaliappan	BZUPK1569E	ME/M. Tech and PhD	05/02/2016	EMBEDDED SYSTEM	2	0	0	Professor	04/03/2020	02/11/2017	Regular
2	Dr.V.Gajendra Kumar	AAMPG2168H	ME/M. Tech and PhD	07/02/2013	Applied Electronics	2	0	0	Professor	14/09/2020	18/06/2012	Regular
3	Dr.S.Venkatesan	BNNPS7090H	ME/M. Tech and PhD	12/07/2012	EMBEDDED SYSTEMS	2	0	0	Professor		01/06/2018	Regular
4	Dr.C.Karthik	APIPC9168K	ME/M. Tech and PhD	08/06/2017	Wireless Communications	2	0	0	Associate Professor		01/06/2018	Regular
5	Dr.S. Vasantha Swamy Nathan	AFLPV5455J	ME/M. Tech and PhD	12/07/2016	Applied Electronics	2	0	0	Associate Professor		30/06/2012	Regular
6	Dr. T Krishnamoorthy	AYUPK7981J	ME/M. Tech and PhD	20/12/2019	VLSI Design	2	0	0	Associate Professor	30/12/2021	25/09/2020	Regular
7	Dr.K.MURALI BABU	BEGPK5272R	ME/M. Tech and PhD	12/09/2014	Applied Electronics	2	0	0	Professor		17/09/2020	Regular
8	Dr.T RAMAKRISHNA	CEAPR2978Q	ME/M. Tech and PhD	11/09/2017	VLSI Design	2	0	0	Associate Professor		22/10/2020	Regular
9	Dr. M. KOTESWARA RAO	BCMPM8152N	ME/M. Tech and PhD	25/02/2020	Machine Learning	18	0	0	Associate Professor		04/07/2022	Regular
10	Dr. M. RAJASEKHAR	AUGPM8210J	ME/M. Tech and PhD	06/06/2019	RADAR SIGNAL PROCESSING	26	0	0	Associate Professor	15/07/2021	22/03/2021	Regular
11	Dr.G.ERNA	AZDPG8392D	ME/M. Tech and PhD	15/12/2021	VLSI Design	7	0	0	Assistant Professor		02/03/2022	Regular
12	S.CH.KANTHA RAO	CMTPS2163K	M.E/M.Tech	01/04/2013	VLSI DESIGN	7	0	0	Assistant Professor		23/05/2013	Regular
13	N VAISHNAVI	AKFPV9458C	M.E/M.Tech	27/05/2010	COMMUNICATION SYSTEMS	3	0	0	Assistant Professor		01/05/2018	Regular
14	Dr.D.ANIL KUMAR	BXUPD5310C	ME/M. Tech and PhD	03/10/2020	IMAGE PROCESSING/MACHINE LEARING	55	0	0	Assistant Professor		28/10/2019	Regular
15	Dr.SK.SUBHANI	NKCPS8316A	ME/M. Tech and PhD	10/11/2020	THERMAL IMAGING	30	0	0	Assistant Professor		16/11/2020	Regular
16	K.SURESH BABU	DCAPK6527B	M.E/M.Tech	16/11/2011	MICROWAVE AND RADAR ENGINEERING	4	0	0	Assistant Professor		27/05/2013	Regular
17	N.DURGA PARAMESWARA RAO	ATNPN1831G	M.E/M.Tech	21/05/2013	EMBEDDED SYSTEM DESIGN	4	0	0	Assistant Professor		18/06/2015	Regular
18	M.BALASUBRAHMANYAM	BZFPM1330N	M.E/M.Tech	02/02/2013	DIGITAL ELECTRONICS & COMMUNICATION SYSTEM	2	0	0	Assistant Professor		01/05/2018	Regular
19	K.NAGARAJU	DUHPK4510D	M.E/M.Tech	19/05/2017	VLSI & ES	2	0	0	Assistant Professor		01/06/2017	Regular
20	R.KOTESWARA RAO	APIPR9823F	M.E/M.Tech	10/03/2010	DIGITAL ELECTRONICS & COMMUNICATION SYSTEM	3	0	0	Assistant Professor		28/09/2020	Regular
21	D.K.KAVITHA	BJBPD4961Q	M.E/M.Tech	19/09/2009	DIGITAL ELECTRONICS & COMMUNICATION SYSTEM	6	0	0	Assistant Professor		28/09/2020	Regular
22	S.ARUNA SRI	AZTPC8955C	M.E/M.Tech	06/05/2015	CESP	1	0	0	Assistant Professor		01/10/2021	Regular
23	M.RAJA KUMAR	BFYPM0751C	M.E/M.Tech	02/11/2012	VLSI DESIGN	0	0	0	Assistant Professor		18/10/2021	Regular
24	B.ALEKYA	BGSPB9715N	M.E/M.Tech	31/12/2013	VLSI&ES	0	0	0	Assistant Professor		18/10/2021	Regular
25	B.SUBBARAO	BHRPB6954M	M.E/M.Tech	31/12/2015	VLSI&ES	4	0	0	Assistant Professor		25/02/2022	Regular
26	T.HARI BABU	AHBPT4025C	M.E/M.Tech	06/12/2013	VLSI&ES	1	0	0	Assistant Professor		01/07/2022	Regular
27	K.LAVANYA	FSVPK2582M	M.E/M.Tech	06/09/2019	DIGITAL ELECTRONICS & COMMUNICATION SYSTEM	1	0	0	Assistant Professor		10/08/2022	Regular
28	Dr.M.VENKATESWARA RAO	CHTPM3862J	ME/M. Tech and PhD	29/09/2020	MICRO STRIP ANTTENA	65	0	0	Assistant Professor		18/08/2022	Regular
29	K.SRINIVASA RAO	CPXPK5874E	M.E/M.Tech	15/12/2014	Electronics and Communication Engineering	1	0	0	Assistant Professor		13/04/2022	Regular
30	P.SIVAKRISHNA	AROPP0947J	M.E/M.Tech	09/09/2011	DIGITAL ELECTRONICS & COMMUNICATION SYSTEM	5	0	0	Assistant Professor		05/06/2013	Regular

31	B.SREENIVASA GANESH	CFWPB5915A	M.E/M.Tech	31/12/2012	VLSI DESIGN	5	0	0	Assistant Professor		20/05/2013	Regular
32	P.PRAGATHI	CBPPP8483A	M.E/M.Tech	03/08/2013	VLSI DESIGN	3	0	0	Assistant Professor		01/06/2016	Regular
33	N.RAMBABU	AHZPN8531H	M.E/M.Tech	19/11/2011	APPLIED ELECTRONICS	3	0	0	Assistant Professor		01/05/2017	Regular
34	M.GAYATHRI	BJXPM1121M	M.E/M.Tech	19/11/2012	DIGITAL ELECTRONICS & COMMUNICATION SYSTEM	2	0	0	Assistant Professor		15/10/2015	Regular
35	N.MANOGNA	AWEPD5536A	M.E/M.Tech	22/02/2016	VLSI&ES	2	0	0	Assistant Professor		02/11/2016	Regular
36	NAMRATA VILASRAO SARODE	CFSPS8098P	M.E/M.Tech	23/03/2015	VLSI DESIGN	2	0	0	Assistant Professor		01/05/2018	Regular
37	M.S.MANOHAR	BJKPM8099R	M.E/M.Tech	23/02/2015	VLSI&ES	3	0	0	Assistant Professor		15/11/2018	Regular
38	U.ANUSHA RANI	ACYPU2936K	M.E/M.Tech	09/02/2015	VLSI & EMBEDDED SYSTEMS	2	0	0	Assistant Professor		07/01/2020	Regular
39	S.JOSAPH	GVUPS6340Q	M.E/M.Tech	31/12/2013	VLSI SYSTEM DESIGN	4	0	0	Assistant Professor		23/01/2020	Regular
40	P.UDAY KUMAR	CWKPP5934J	M.E/M.Tech	21/09/2019	COMMUNICATION SYSTEMS	1	0	0	Assistant Professor		30/09/2020	Regular
41	A.SRINIVASARAO	AXYPA6665L	M.E/M.Tech	17/12/2014	VLSI SYSTEM DESIGN	1	0	0	Assistant Professor		01/05/2017	Regular
42	T.SRIRAM MURTHY	AZZPT4599D	M.E/M.Tech	13/04/2011	EMBEDD SYSTEMS	2	0	0	Assistant Professor		22/03/2021	Regular
43	K.LAKSHMI NARASAMMA	DIYPK4491J	M.E/M.Tech	23/09/2017	VLSI&ES	1	0	0	Assistant Professor		01/12/2020	Regular
44	K.VENKA REDDY	AJJPV7236P	M.E/M.Tech	14/06/2017	DIGITAL ELECTRONICS & COMMUNICATION SYSTEM	2	0	0	Assistant Professor		01/10/2021	Regular
45	B.RAJANI	AKZPB8828Q	M.E/M.Tech	21/12/2015	Electronics and Communication Engineering	1	0	0	Assistant Professor		01/03/2022	Regular
46	A.THIRUMALA RAO	AUUPA9925G	M.E/M.Tech	21/12/2016	VLSI & ES	1	0	0	Assistant Professor		01/03/2022	Regular
47	Dr.M.Srinagesh	AHTPM0013B	ME/M. Tech and PhD	09/05/2016	MEMS	10	0	0	Professor		23/02/2015	Regular
48	Dr. R. Prakasa Rao	ANHPR3047C	ME/M. Tech and PhD	17/05/2017	VLSI & ES	10	0	0	Professor		02/09/2020	Regular
49	Dr. J.V. Anand	ALBPA4260C	ME/M. Tech and PhD	23/05/2017	Information and Communication	10	0	0	Associate Professor	10/07/2019	01/05/2017	Regular
50	K.SUNDEEP	AVRPK4466E	M.E/M.Tech	12/04/2007	COMMUNICATION ENGINEERING	5	0	0	Assistant Professor		10/06/2011	Regular
51	V.PRIYANKA	CZHPP0285Q	M.E/M.Tech	21/12/2016	VLSI&ES	1	0	0	Assistant Professor		05/01/2017	Regular
52	A.Sujana	BBPPA6625Q	M.E/M.Tech	12/05/2016	CESP	1	0	0	Assistant Professor		20/06/2016	Regular
53	P. Venkata Raja Sekhar	BVWPP6780L	M.E/M.Tech	08/08/2018	VLSI&ES	1	0	0	Assistant Professor		03/06/2019	Regular
54	N. Sri Lakshmi	AOYPN2746L	M.E/M.Tech	10/02/2016	VLSI&ES	1	0	0	Assistant Professor		15/11/2019	Regular
55	Dr. N. Sureshkumar	BXBPS0925F	ME/M. Tech and PhD	19/06/2018	Wireless Communications	5	0	0	Associate Professor		15/11/2019	Regular
56	Y.R.K.Paramahamsa	AAEPY2391Q	M.E/M.Tech	08/10/2005	DIGITAL SYSTEMS & COMPUTER ELECTRONICS	2	0	0	Assistant Professor		25/04/2017	Regular
57	N.Prakash Babu	APVPN7275G	M.E/M.Tech	27/05/2010	DIGITAL ELECTRONICS & COMMUNICATION SYSTEM	5	0	0	Assistant Professor		02/07/2011	Regular
58	G.Balanagireddy	BNLPG4577L	M.E/M.Tech	07/10/2010	NANO TECHNOLOGY	5	0	0	Assistant Professor		05/02/2013	Regular
59	Sk.Ayesha	DGVPS3232L	M.E/M.Tech	23/11/2011	VLSI SYSTEM DESIGN	2	0	0	Assistant Professor		01/02/2012	Regular
60	P.Sudheer Chakravarthi	BGHPP5129H	M.E/M.Tech	10/12/2013	DIGITAL ELECTRONICS & COMMUNICATION SYSTEM	2	0	0	Assistant Professor		01/05/2017	Regular
61	Sri Sai Charan Naidu	AOEPN4000P	M.E/M.Tech	11/12/2014	DIGITAL SYSTEMS & COMPUTER ELECTRONICS	1	0	0	Assistant Professor		10/04/2017	Regular
62	T.Chaithanya	AIEPT5026H	M.E/M.Tech	10/12/2012	EMBEDDED SYSTEMS	1	0	0	Assistant Professor		03/06/2019	Regular
63	Dr. K. Damodar	CBBPD9826M	ME/M. Tech and PhD	24/11/2018	Wireless Communications	3	0	0	Associate Professor	04/01/2021	23/09/2020	Regular

64	V VISHNUVARDHAN	APDPV9426M	M.E/M.Tech	12/05/2011	EMBEDDED SYSTEMS	1	0	0	Assistant Professor		21/10/2020	Regular
65	K.SRAVANI	JYYPK0258P	M.E/M.Tech	06/09/2019	DIGITAL ELECTRONICS & COMMUNICATION SYSTEM	1	0	0	Assistant Professor		28/09/2020	Regular
66	F. Asajyothi	AEGPF6581B	M.E/M.Tech	30/01/2014	VLSI & EMBEDDED SYSTEMS	0	0	0	Assistant Professor		25/09/2020	Regular

5.1 Student-Faculty Ratio (SFR) (20) Tota

UG

No. of UG Programs in the Department 1

ELECTRONICS AND COMMUNICATION ENGINEERING						
Year of Study	**CAY**		**CAYm1**		**CAYm2**	
	(2022-23)		**(2021-22)**		**(2020-21)**	
	Sanction Intake	**Actual admitted through lateral entry students**	**Sanction Intake**	**Actual admitted through lateral entry students**	**Sanction Intake**	**Actual admitted through lateral entry students**
2nd Year	180	18	180	17	180	18
3rd Year	180	17	180	18	180	18
4th Year	180	18	180	18	180	24
Sub-Total	**540**	**53**	**540**	**53**	**540**	**60**
Total	**593**		**593**		**600**	
Grand Total	593		593		600	

PG

No. of PG Programs in the Department 1

VLSI AND EMBEDDED SYSTEMS			
Year of Study	**CAY(2022-23)**	**CAYm1(2021-22)**	**CAYm2 (2020-21)**
	Sanction Intake	**Sanction Intake**	**Sanction Intake**
1st Year	18	18	18
2nd Year	18	18	18
Total	**36**	**36**	**36**
Grand Total	36	36	36

SFR

No. of UG Programs in the Department 1

No. of PG Programs in the Department 1

Description	**CAY(2022-23)**	**CAYm1 (2021-22)**	**CAYm2 (2020-21)**
Total No. of Students in the Department(S)	629 **Sum total of all (UG+PG) students**	629 **Sum total of all (UG+PG) students**	636 **Sum total of all (UG+PG) students**
No. of Faculty in the Department(F)	44 **F1**	43 **F2**	47 **F3**
Student Faculty Ratio(SFR)	14.30 **SFR1=S1/F1**	13.53 **SFR2=S2/F2**	14.63 **SFR3=S3/F3**
Average SFR	14.15 **SFR=(SFR1+SFR2+SFR3)/3**		
F=Total Number of Faculty Members in the Department (excluding first year faculty)			

Note: All the faculty whether regular or contractual (except Part-Time), will be considered. The contractual faculty (doing away with the terminology of visiting/adjunct faculty, whatsoever) who have taught for 2 consecutive semesters in the corresponding academic year on full time basis shall be considered for the purpose of calculation in the Faculty Student Ratio. However, following will be ensured in case of contractual faculty:

1. Shall have the AICTE prescribed qualifications and experience.
2. Shall be appointed on full time basis and worked for consecutive two semesters during the particular academic year under consideration.
3. Should have gone through an appropriate process of selection and the records of the same shall be made available to the visiting team during NBA visit

5.1.1. Provide the information about the regular and contractual faculty as per the format mentioned below:

	Total number of regular faculty in the department	**Total number of contractual faculty in the department**
CAY(2022-23)	44	0
CAYm1(2021-22)	43	0
CAYm2(2020-21)	47	0

Average SFR for three assessment years : 14.15

Assessment SFR : 20

5.2 Faculty Cadre Proportion (20) Tota

Institute

Year	Professors		Associate Professors		Assistant Professors	
	Required F1	Available	Required F2	Available	Required F3	Available
CAY(2022-23)	3.00	4.00	6.00	7.00	20.00	33.00
CAYm1(2021-22)	3.00	4.00	6.00	6.00	20.00	33.00
CAYm2(2020-21)	3.00	6.00	7.00	4.00	21.00	37.00
Average Numbers	3.00	4.67	6.33	5.67	20.33	34.33

Cadre Ratio Marks [(AF1 / RF1) + [(AF2 / RF2) * 0.6] + [(AF3 / RF3) * 0.4]] * 10 : 20.00

5.3 Faculty Qualification (20) Tota

Institute

	X	Y	F	FQ = 2 x [(10X + 4Y) / F)]
2022-23(CAY)	15	29	31.00	17.16
2021-22(CAYm1)	12	31	31.00	15.74
2020-21(CAYm2)	14	33	31.00	17.55

Average Assessment : 16.82

5.4 Faculty Retention (10) Tot

Institute

Description	2021-22 (CAYm1)	2022-23 (CAY)
No of Faculty Retained	37	31
Total No of Faculty	47	47
% of Faculty Retained	79	66

Average : 72.00

Assessment Marks : 6.00

5.5 Faculty competencies in correlation to Program Specific Criteria (10) Tota

Institute

A)Specialization:

Faculty Specialization

S.No	Name of the Faculty Member	Specialization
1.	Dr.J.KALIAPPAN	EMBEDDED SYSTEM
2.	Dr.V.GAJENDRA KUMAR	APPLIED ELECTRONICS
3.	Dr.S.VENKATESAN	EMBEDDED SYSTEMS
4.	Dr.C.KARTHIK	WIRELESS COMMUNICATIONS
5.	Dr.VASANTHA SWAMI NATHAN	APPLIED ELECTRONICS
6.	Dr.T.KRISHNAMOORTHY	VLSI Design
7.	Dr.K.MURALIBABU	APPLIED ELECTRONICS
8.	Dr.T.RAMAKRISHNA	VLSI Design
9.	Dr M.KOTESWARA RAO	MACHINE LEARNING
10.	Dr.M.RAJASEKHAR	RADAR SIGNAL PROCESSING
11.	Dr.K. Damodar	WIRELESS COMMUNICATIONS
12.	Dr.G.ERNA	VLSI Design
13.	S.CH.KANTHA RAO	VLSI DESIGN
14.	N VAISHNAVI	COMMUNICATION SYSTEMS
15.	P.SIVA KRISHNA	DIGITAL ELECTRONICS & COMMUNICATION SYSTEM
16.	Dr.D.ANIL KUMAR	IMAGE PROCESSING/MACHINE LEARING
17.	Dr.SK.SUBHANI	THERMAL IMAGING
18.	K.SURESH BABU	MICROWAVE AND RADAR ENGINEERING
19.	N.DURGA PARAMESWARA RAO	EMBEDDED SYSTEMS
20.	M.BALASUBRAHMANYAM	DIGITAL ELECTRONICS & COMMUNICATION SYSTEM
21.	K.NAGARAJU	VLSI & ES
22.	R.KOTESWARA RAO	DIGITAL ELECTRONICS & COMMUNICATION SYSTEM
23.	D.K.KAVITHA	DIGITAL ELECTRONICS & COMMUNICATION SYSTEM
24.	K.SRAVANI	DIGITAL ELECTRONICS & COMMUNICATION SYSTEM
25.	S.ARUNA SRI	CESP
26.	M.RAJA KUMAR	VLSID
27.	B.ALEKYA	VLSI&ES
28.	B.SUBBARAO	VLSI&ES
29.	T.HARI BABU	VLSI&ES
30.	K.LAVANYA	DECS
31.	Dr.M.VENKATESWARA RAO	MICRO STRIP ANTTENA
32.	K.SRINIVASA RAO	ECE
33.	B.SRINIVASA GANESH	VLSISD
34.	P.PRAGATHI	VLSI DESIGN
35.	N.RAMBABU	APPLIED ELECTRONICS
36.	M.GAYATHRI	DIGITAL ELECTRONICS&COMMUNICATION SYSTEM
37.	N.MANOGNA	VLSI&ES
38.	NAMRATA VILASRAO SARODE	VLSI DESIGN
39.	M.S.Manohar	VLSI&ES
40.	U.ANUSHA RANI	VLSI & EMBEDDED SYSTEMS
41.	S.JOSAPH	VLSI SYSTEM DESIGN
42.	P.UDAY KUMAR	COMMUNICATION SYSTEMS

43.	A.SRINIVASARAO	VLSI SYSTEM DESIGN
44.	T.SRIRAM MURTHY	EMBEDD SYSTEMS
45.	K.LAKSHMI NARASAMMA	VLSI&ES
46.	K.VENKA REDDY	DECS
47.	B.RAJANI	ECE
48.	A.THIRUMALA RAO	VLSI & ES
49.	V VISHNUVARDHAN	EMBEDDED SYSTEMS

B) Research Publications:

Faculties interested in specific domains of research for publishing their ideas

S.NO	Specialization	Name of theFaculty	No of Publications
1.	EMBEDDED SYSTEMS	DR.J.KALIAPPAN DR.S.VENKATESAN T.SRIRAM MURTHY V VISHNUVARDHAN N.DURGA PARAMESWARA RAO	7
2.	APPLIED ELECTRONICS	DR.V.GAJENDRA KUMAR DR.VASANTHA SWAMI NATHAN DR.K.MURALIBABU N.RAMBABU	4
3.	Wireless Communications	DR.C.KARTHIK Dr.K.Damodar N VAISHNAVI P.UDAY KUMAR	4
4.	VLSI Design	DR.T.KRISHNAMOORTHY DR.T.RAMAKRISHNA Dr.G.ERNA S.CH.KANTHA RAO M.RAJA KUMAR B.SRINIVASA GANESH P.PRAGATHI NAMRATA VILASRAO SARODE S.JOSAPH A.SRINIVASARAO	20
5.	VLSI & ES	A.THIRUMALA RAO K.LAKSHMI NARASAMMA U.ANUSHA RANI M.S.Manohar N.MANOGNA B.ALEKYA B.SUBBARAO T.HARI BABU K.NAGARAJU F.ASA JYOTHI	10
6.	DIGITAL ELECTRONICS & COMMUNICATION SYSTEM	K.VENKA REDDY M.GAYATHRI R.KOTESWARA RAO D.K.KAVITHA K.SRAVANI M.BALASUBRAHMANYAM K.LAVANYA P.SIVA KRISHNA	15
7.	IMAGE PROCESSING/MACHINE LEARING	Dr.D.ANIL KUMAR	10
8.	MICRO STRIP ANTTENA	Dr.M.VENKATESWARA RAO	25
9.	THERMAL IMAGING	Dr.SK.SUBHANI	10
10.	RADAR SIGNAL PROCESSING	Dr.M.RAJASEKHAR	25

11.	MICROWAVE AND RADAR ENGINEERING	K.SURESH BABU	4
12.	ECE	B.RAJANI K.SRINIVASA RAO	2

C) Course Development

R18 Regulations Course Development

S.No	Year/Sem	Name of the Course	Name of the Co-ordinator	Supporting Faculty
1	II-I	Semiconductor Devices and Circuits	S.CH.KANTHA RAO	V.VISHNU VARDHAN
2		Signals and Systems	B.SRINIVASA GANESH	S.JOSAPH K.SRAVANI
3		Switching Theory and Logic Design	N.DURGA PRAMESH	K.NAGA RAJU NAMRATHA VILAS SARODE
4		Semiconductor Devices and Circuits Lab	S.CH.KANTHA RAO	P.UDAY KUMAR B.ALEKYA A.SRINIVAS RAO K.SRINIVASA RAO K.NAGARAJU
5	II-II	Electronic Circuit Analysis	S.CH.KANTHA RAO	M.S.MANOHAR
6		Electromagnetic Waves and Transmission Lines	R.KOTESWARA RAO	B.SRINIVASA GANESH
7		Analog Communications	P.PRAGATHI	K.LAKSHMI NARASAMMA
8		Pulse and Digital Circuits	B.SUBBARAO	P.SIVA KRISHNA T.SRIRAMA MURTHY
9		Random Variables and Stochastic Process	K.SRINIVASULU	A.NAGAMALLESWARA RAO
10		Electronic Circuit Analysis Lab	S.CH.KANTHA RAO	P.UDAY KUMAR B.RAJANI B.SUBBARAO K.SRAVANI K.SRINIVASA RAO A.SRINIVAS RAO
11		Analog Communications Lab	K.SURESH BABU	B.SRINIVASA GANESH & P.PRAGATHI
12		Pulse and Digital Circuits Lab	B.SUBBARAO	N.VAISHNAVI V.PRIYANKA P.SIVA KRISHNA P.UDAY KUMAR A.SRINIVASA RAO K.LAKSHMI NARASAMMA S.JOSAPH K.SRAVANI B.RAJANI A.THIRUMULARAO
13	III-I	Linear and Digital IC Applications	Dr. MURALI BABU	D.K.KAVITHA S.JOSAPH
14		Digital Communications	Dr.RAMAKRISHNA	M.BALASUBRAHMANYAM M.S.MANOHAR
15		Antenna and Wave Propagation	Dr.VASANTHA SWAMY NATHAN	K.SURESH BABU P.SIVA KRISHNA
16		Linear and Digital IC Applications Lab	Dr.MURALI BABU	V.VISHNU VARDHAN B.S.GANESH D.K.KAVITHA A.THIRMALA RAO S.JOSAPH K.SURESH BABU P.UDAY KUMAR
17		Digital Communications Lab	M.S.MANOHAR	K.SRAVANI B.ALEKYA

18	III-II	Digital Signal Processing	Dr.K.MURALI BABU	Dr.SK.SUBHANI
19		VLSI Design	Dr.G.ERNA	N.RAMBABU
20		Microprocessors and Microcontrollers	Dr. C.KARTIK	K.SUNDEEP
21		Microwave Engineering	Dr.KRISHNA MOORTHY	D.K.KAVITHA Dr.VASANTHA SWAMI NATHAN
22		Microprocessors and Microcontrollers Lab	V.VISHNU VARDAN	K.SUNDEEP V.VISHNU VARDAN A.THIRUMULA RAO K.SRAVANI K.SRINIVASA RAO R.KOTESWARA RAO
23		Digital Signal Processing Lab	Dr.K.MURALI BABU	Dr.D.ANIL KUMAR Dr.SK.SUBHANI K.DAMODAR M.BALASUBRAHMANYAM
24		VLSI Design Lab	M.RAJA KUMAR	N.RAMBABU D.K.KAVITHA
25	IV-I	Radar Systems	Dr. M. RAJASEKHAR	K.SUNDEEP
26		Digital Image Processing	Dr. SK. SUBHANI	V.PRIYANKA Dr. KRISHNA MOORTHY
27		Internet of Things	Dr. R. PRAKASH RAO	M.RAJA KUMAR
28		Embedded & Real Time Operating Systems	N. MANOGNA	U.ANUSHA RANI
29		Artificial Neural Networks	Dr. D. ANIL KUMAR	F.ASA JYOTHI
30		Electronic Measurements And Instrumentation	A.SRINIVASA RAO	M.GAYATHRI
31		Microwave Engineering and Optical Comm. Lab	Dr.SK. SUBHANI	K.SUNDEEP M.BALA SUBRAMANYAM N.RAM BABU S.ARUNA SRI K.VENKA REDDY
32		IoT Lab	Dr. R. PRAKASH RAO	Dr. KRISHNA MOORTHY P.KIRAN BABU V.PRIYANKA
33	IV-II	Wireless Sensor Networks	Dr.J.KALIAPPAN	Dr.M.VENAKATESWARA RAO Dr.V.GAJENDRA KUMAR
34		Satellite Communications	Dr.S.VENKATESAN	F.ASA JYOTHI
35		Cellular and Mobile Communications	M.RAJA KUMAR	

R21 Regulations Course Development

S.No	Year/Sem	Name of the Course	Name of the Co-ordinator	Supporting Faculty
1	II-I	Signals and Systems	R.KOTESWARA RAO	N.DURGA PARAMESWARARAO U.ANUSHA RANI
2		Switching Theory and Logic Design	D.K.KAVITHA	R.KOTESWARA RAO N.MANOGNA
3		Electronic Circuit Analysis	Dr.M.KOTESWARA RAO	S.CH.KANTHA RAO
4		Pulse and Digital Circuits	B.SRINIVASA GANESH	M.GAYATHRI B.SUBBA RAO
5		STLD Laboratory	D.K..KAVITHA	R.KOTESWARA RAO N.MANOGNA
6		Analog Circuits Laboratory	Dr.M.KOTESWARA RAO	B.SUBBARAO K.LAVANYA B.ALEKYA S.CH.KANTHA RAO K.LAKSHMI NARASAMMA
7		Signals and Systems Laboratory	R.KOTESWARA RAO	N.DURGA PARAMESWARA RAO A.THIRUMULA RAO P.UDAY KUMAR K.LAVANYA K.DAMODAR M.GAYATHRI

8	II-II	Random Variables and Stochastic Process	K.SRINIVASULU	
9		Analog & Digital Communications	Dr.M.KOTESWARA RAO	K.NAGA RAJU Dr..UDAY BHASKAR
10		Linear and Digital IC Applications	S.CH.KANTHA RAO	T.SRIRAM MURTHY
11		Electro Magnetic Waves & Transmission Lines	R.KOTESWARA RAO	P.PRAGATHI
12		Analog & Digital Communications Laboratory	Dr..UDAYBHASKAR	V.VISHNU VARDHAN R.KOTESWARA RAO A.SRINIVASA RAO K.LAVANYA U.ANUASHA RANI
13		Linear and Digital IC Applications Laboratory	S.CH.KANTHARAO	K.SRINIVASA RAO N.DURGA PARAMESH P.UDAY KUMAR K.LAKSHMI NARASAMMA

5.6 Innovations by the Faculty in Teaching and Learning (10) Tota

Institute

1. Conduct of remedial /backlog classes and special classes for slow learners so as to improve the learning skills of the student.
2. The course materials are distributed among the students by the subject faculty well in advance of the commencement of class.
3. Guest Lectures are conducted by inviting eminent persons from Industry and Academics.
4. Students are encouraged to access various forms of e-materials for their self development
5. Use of modern teaching aids like LCD projectors, lecture capturing system (LCS), Wireless Keyboard and mouse, Wireless Presenter, USB wireless pen mouse etc.
6. Alumni students are invited for technical talk and interact with the students.
7. Quick access to the learning material like hosting of the PPTs and course material on MOODLE.
8. Arranging live Webinars by eminent professors and subject experts. Displaying videos which effectively communicate working of actual engineering solutions.
9. Student Seminars and workshops are conducted which improves their communication and learning skills.
10. The students are also encouraged and drive to online NASCOM/CISCO, SPOKEN TUTORIAL courses by the subject experts.

5.7 Faculty as participants in Faculty development/training activities/STTPs (15) Tota

Institute

Name of the faculty	Max 5 Per Faculty		
	2021-22(CAYm1)	2020-21(CAYm2)	2019-20(CAYm3)
DR.M.SRINAGESH	0.00	5.00	5.00
DR.V.GAJENDRA KUMAR	5.00	5.00	5.00
DR.S.VENKATESAN	0.00	5.00	0.00
DR.K.JEYA KUMAR	0.00	0.00	5.00
DR.P.MANIGANDA	0.00	5.00	5.00
DR. R. PRAKASH RAO	5.00	5.00	0.00
DR.J.KALIAPPAN	5.00	0.00	5.00
DR. N. SURESH KUMAR	0.00	5.00	5.00
DR.C.KARTHIK	5.00	0.00	5.00
DR.VASANTHA SWAMI NATHAN	5.00	5.00	0.00
DR.T.KRISHNAMOORTHY	5.00	0.00	5.00
DR. K. MURALIBABU	0.00	5.00	0.00
DR. T. RAMAKRISHNA	5.00	5.00	0.00
DR. J.V. ANAND	0.00	5.00	0.00
DR.M.RAJASEKHAR	5.00	5.00	0.00
DR.G.ERNA	5.00	0.00	0.00
K.SUNDEEP	5.00	5.00	0.00
S.CH.KANTHA RAO	5.00	5.00	0.00
N VAISHNAVI	0.00	5.00	5.00
P.SIVA KRISHNA	0.00	5.00	5.00
DR.D.ANIL KUMAR	5.00	5.00	5.00
DR.SK.SUBHANI	5.00	5.00	0.00
B.SRINIVAS GANESH	5.00	5.00	0.00
K.SURESH BABU	5.00	5.00	0.00
P.PRAGATHI	5.00	5.00	0.00
N.DURGA PARAMESWARA RAO	5.00	5.00	0.00
V.PRIYANKA	0.00	5.00	5.00
N.MANOGNA	5.00	5.00	0.00
N.RAMBABU	5.00	5.00	0.00
M.GAYATHRI	5.00	5.00	0.00
M.BALASUBRAHMANYAM	5.00	0.00	5.00
NAMRATA VILASRAO SARODE	5.00	5.00	0.00
A.SUJANA	0.00	5.00	0.00
M.S.MANOHAR	5.00	5.00	5.00
K.NAGARAJU	5.00	5.00	5.00
U.ANUSHA RANI	5.00	5.00	0.00
S.JOSAPH	5.00	0.00	0.00
R.KOTESWARA RAO	5.00	5.00	0.00
D.K.KAVITHA	5.00	5.00	0.00
D.K.KAVITHA	5.00	5.00	0.00

K.SRAVANI	5.00	5.00	0.00
P.UDAY KUMAR	5.00	0.00	0.00
A.SRINIVASARAO	5.00	5.00	0.00
T.SRIRAM MURTHY	5.00	5.00	0.00
K.LAKSHMI NARASAMMA	5.00	5.00	0.00
S.ARUNA SRI	5.00	0.00	0.00
K.VENKA REDDY	5.00	0.00	0.00
M.RAJA KUMAR	5.00	0.00	0.00
B.ALEKYA	5.00	0.00	0.00
B.SUBBARAO	5.00	0.00	0.00
K.SRINIVASA RAO	5.00	0.00	0.00
B.RAJANI	5.00	0.00	0.00
A.THIRUMALA RAO	5.00	0.00	0.00
K DAMODAR	5.00	5.00	0.00
V VISHNUVARDHAN	5.00	0.00	0.00
Y.R.K.PARAMAHAMSA	0.00	0.00	0.00
N.PRAKASH BABU	0.00	0.00	5.00
G.BALANAGIREDDY	0.00	5.00	0.00
SK.AYESHA	0.00	5.00	0.00
P.SUDHEER CHAKRAVARTHI	0.00	0.00	5.00
T.CHAITHANYA	0.00	5.00	5.00
P. VENKATA RAJA SEKHAR	0.00	5.00	0.00
N. SRI LAKSHMI	0.00	5.00	0.00
Sum	220.00	215.00	90.00
RF = Number of Faculty required to comply with 20:1 Student Faculty Ratioas per 5.1	31.00	31.00	31.00
Assessment [3*(Sum / 0.5RF)]	42.58	41.61	17.42

Average assessment over 3 years: 15.00

5.8 Research and Development (75) Tota

5.8.1 Academic Research (20) Institute

A.Consolidated Publications From2020 to Till Date

INTERNATIONAL JOURNALS					
Academic Year	**UGC Care/ Conference**	**SCOPUS**	**SCI**	**Book Chapter**	**TOTAL**
2020-2021	3	12	2	1	18
2021-2022	2	3	4	6	15
2022-2023	10	10	7	-	27
TOTAL	15	25	13	7	60

B. Ph.D Awarded during Assessment Period:

S. No	Name of the Faculty	Institution/University	Month & Year of Awarded
1	Dr. D. Anil Kumar	KL Deemed to be University	October 2020

C.Ph.D Pursuing during the assessment period while working in the institute

S.NO	NAME	YEAR OF REGISTRATION	UNIVERSITY
1	DURGA PARAMESWARA RAO.N	2019	SAVEETHA UNIVERSITY
2	T.SRIRAMA MURTHY	2019	KLU
3	D.K.KAVITHA	2020	KLU
4	R.KOTESWARA RAO	2022	VELS(VISTAS)UNIVERSITY
5	M.BALASUBRAHMANYAM	2020	VELTECH UNIVERSITY
6	M.S.MANOHAR	2020	VELTECH UNIVERSITY
7	M.RAJA KUMAR	2021	VELS(VISTAS)UNIVERSITY
8	U.ANUSHA RANI	2020	VELTECH UNIVERSITY
9	V.VISHNU VARDHAN	2017	VELS(VISTAS)UNIVERSITY

5.8.2 Sponsored Research (20) Institute

2021-22 (CAYm1)

Project Title	Duration	Funding Agency	Amount(in Rupees)
Classica Indian Dance Digit	2	SERB	1915160.00
			Total Amount(X): 1915160.00

2020-21 (CAYm2)

Project Title	Duration	Funding Agency	Amount(in Rupees)

2019-20 (CAYm3)

Project Title	Duration	Funding Agency	Amount(in Rupees)

Cumulative Amount(X + Y + Z) =

5.8.3 Development activities (15) Institute

1.Product Development

Patent Publication Details (2022) No: 2							
Primary Contributing Department	**Name of Authors**	**Date of filing**	**Date of Publication**	**Title**	**Application Number**	**Agency name**	**Country**
ECE	Dr. M. Sreenivasan, Dande Anil Kumar, PittuSriharitha, PolurieVenkat Vijay Kishore, Tanguturi Rama Chaitanya	29/06/2022	8/7/2022	iDance Tutor: A 3D Digital Indian Classical Dance Motion Capture Tool	202241037200	Intellectual Property INDIA	India
ECE	N.Vaishnavi, KondapiLahari, Thota Manohar, ManariJanakiram, M.S. Manohar, Dr. M. Sreenivasan	1/5/2022	1/21/2022	Multi-Purpose Humanoid Robo for child guidance	202241000427	Intellectual Property INDIA	India

Patent Publication Details (2020) No: 3							
Primary Contributing Department	**Name of Authors**	**Date of filing**	**Date of Publication**	**Title**	**Application Number**	**Agency name**	**Country**
ECE	T. Manohar, M. Janakiram, M. Sreenivasan, S.RajAnand, R. Krishna, K. Sundeep.,	23/1/2020	31/01/2020	Smart Language ID Card	202041002977	Intellectual Property INDIA	India
ECE	M. L. Pravallika, T. Manohar, S. Raj Anand, M. Sreenivasan, R. Krishna, V. Priyanka, V. Lalitha.,	3/3/2020	6/3/2020	Smart Voice commanding GPS watch	202041009100	Intellectual Property INDIA	India
ECE	Srinagesh, M.Sreenivasan	5/2/2020	14/2/2020	WIRELESS PEEL TESTING INSTRUMENT FOR UNDERGROUND BURIED GAS PIPES AS PER DIN 36070 METHOD II IN THE INDUSTRIAL HARSH ENVIRONMENT.	202041005044	Intellectual Property INDIA	India

3.Instructional materials

1. Question Banks comprising of indicative set of questions are given to students in all theory courses as mandatory practice.
2. Course Files.
3. Lab Manual of lab courses.

5.8.4 Consultancy (from Industry) (20) Institute

2021-22 (CAYm1)

Project Title	Duration	Funding Agency	Amount(in Rupees)
Digital Through	2	PACE DigiTek	900000.00
			Total Amount(X): 900000.00

2020-21 (CAYm2)

Project Title	Duration	Funding Agency	Amount(in Rupees)
Analysis of Sel	2 Years	yantri Siksha T	425000.00
			Total Amount(Y): 425000.00

2019-20 (CAYm3)

Project Title	Duration	Funding Agency	Amount(in Rupees)
Enhanced Spectral Resolut	2 years	PACE Power S	600000.00
			Total Amount(Z): 600000.00

Cumulative Amount(X + Y + Z) = 1925000.00

5.9 Faculty Performance Appraisal and Development System (FPADS) (10) Tota

Institute

The institute has a thorough and well-defined mechanism for evaluating teacher performance and professional growth. The self-appraisal form is only collected once a year at the end of the academic year, after which the department head analyzes and passes it on to the principal. The management forms an expert panel to assess the effectiveness of the faculty and offer recommendations for future development.

All the criteria are given points, and each faculty is assessed according to the points they have earned. They should meet the basic standards for all relevant heads, including teaching, research and consultancy, rewards and recognitions, departmental activities, and campus administrative activities.

List of contents consider for evaluation are listed below

I. Academic and Career Profile
II. Contribution to Teaching and Learning

1. Academic Contributions
2. Use of participatory and innovative Teaching-Learning methodologies/ICT facilities used; updating of subject content, course improvement etc.
3. Content beyond syllabus covered for the Subject/Laboratory taught during the assessment period.
4. Percentage of student pass and feedback in the subjects/Laboratory taught during the assessment period.
5. UG/PG projects guided during assessment period
6. Research and academic contribution during the assessment period includes
7. Refresher courses, STTP, Orientation courses, Teaching & Learning evolution programs, soft skills development programs, FDPs attended.
8. Professional development activities organized such as FDP's, Seminars, Conferences and STTP's etc.
9. Contribution to the development of Department/Institution through participation in academic and administrative comities and responsibilities.
10. Contribution to the Academics and Examinations (Question papers setting, evolution of answer scripts, invigilation and observer duty) during the assessment period.
11. Membership on professional bodies.
12. Any other contribution during the assessment period.

5.10 Visiting/Adjunct/Emeritus Faculty etc. (10) Tota

Institute

5.10 Visiting/Adjunct/Emeritus Faculty etc

S.No	Name of The Visiting/Adjunct/Emeritus Faculty	Designation	Company/Institution
1	A.Sambath Kumar	Divisional Engineer	BSNL,Puducherry
2	D. AvinashBabu	Scientific Assistant	IMD(India Meteorological Dept
3	V.Govinda Rao	Managing Director	MICROLINK INFORMATION TECNOLOGY

S.No	Name of The Faculty	Hours Taken		
		2020-2021	2021-22	2022-23
1	A. SambathKumar	25	30	25
2	D. AvinashBabu	30	--	25
3	V.Govinda Rao	--	25	--
	Total	55	55	50

S.No	NAME OF THE FACULTY	HOURS TAKEN	MODULE	SUJBECT NAME & CODE	YEAR&SEM	ACADEMIC YEAR
1	A. SambathKumar	25	Digital Electronics	Switching Theory and Logic Design – P21ECT03	II-I	2022-23
2	D. AvinashBabu	25	Communication Systems	Satellite Communications – P18ECE13	IV-II	2022-23
3	V.Govinda Rao	--	--	--	--	2022-23
4	A. SambathKumar	30	Communication Systems	Microwave Engineering – P18ECT15	III-II	2021-22
5	D. AvinashBabu	--	--	--	--	2021-22
6	V.Govinda Rao	25	Circuits	Semiconductor Devices & Circuits – P18ECT01	II-I	2021-22
7	A. SambathKumar	25	Communication Systems	Digital Communication – P18ECT10	III-I	2020-21
8	D. AvinashBabu	30	Signal Processing	Digital Communication – P18ECT12	III-II	2020-21
9	V.Govinda Rao	--	--	--	--	2020-21

6 FACILITIES AND TECHNICAL SUPPORT (80) Total M

6.1 Adequate and well equipped laboratories, and technical manpower (40) Tota

Institute

Sr. No	Name of the Laboratory	Number of students per set up(Batch Size)	Name of the Important Equipment	Weekly utilization status(all the courses for which the lab is utilized)	Technical Manpower Support		
					Name of the Technical staff	Designation	Qualification
1	Electronics Dev	3	1. CRO (0-30)M	15 Hours	B. Ramesh Rec	Lab Technician	DECE
2	Electronic Circu	3	1.CRO (0-30)M	15 Hours	B. Ramesh Rec	Lab Technician	DECE
3	Signals and Sy	1	Hardware : 1. (	15 Hours	R.Vinod	Lab Technician	B.Tech
4	Switching Thec	3	1. Linear & Dig	15 Hours	V. Kalidas Naid	Lab Technician	DECE
5	Analog Circuits	3	1. CRO(0-30)M	15 Hours	B.Rameh Redc	Lab Technician	DECE
6	Analog Commu	3	1. Amplitude M	15 Hours	U. Rahul	Lab Technician	B.Tech
7	Pulse And Digit	3	1. CRO(0-30)M	15 Hours	B. Ramesh Rec	Lab Technician	DECE
8	Linear And Dig	3	1. Linear and D	15 Hours	V. Kalidas Naid	Lab Technician	DECE
9	Digital Commu	3	1Time Division	15 Hours	U. Rahul	Lab Technician	DECE
10	Microprocesso	1	1. Configuratio	15 Hours	R.Vinod	Lab Technician	B.Tech
11	Digital Signal P	1	1. Computers S	15 Hours	R.Vinod	Lab Technician	B.Tech
12	VLSI	1	1.computers Sy	15 Hours	Ch.Lavanya	Lab Technician	B.Tech
13	IoT	3	1. Arduino Uno	15 Hours	R.Vinod	Lab Technician	B.Tech
14	Microwave Eng	3	1. Klystron Pov	15 Hours	Ch.Lavanya	Lab Technician	B.Tech
15	Semiconductor	3	1. CRO (0-30)M	15 hours	B.Ramesh Rec	Lab Technician	DECE
16	Analog and Dig	3	Trainer Kits: 1	15 hours	U Rahul	Lab Technician	B.Tech

6.2 Laboratories maintenance and overall ambiance (10)

Tota

Institute

Maintenance:

1. Do's and Don'ts and Safety measures rules are displayed in each laboratory.
2. Well Technical Staff are available for maintenance of Electronic equipment's and software.
3. Department having four 20 KVA UPS, 42AmH along with Batteries is used in case of power failure in PC System Labs.
4. Servicing of each laboratory is doing frequently
5. Minor Repairs are carried out by the technical staff of the department based on available Resources and expertise.
6. Department having internet of 100 Mbps and Wi-Fi of 35 Mbps is maintainedfor students and Faculty usage.
7. All necessary PC system regular software like Microsoft office, browser,lab software, antivirus software etc, is installed and maintained.

Ambiance:

1. The infrastructure and added facilities in the laboratories create the right ambience for the students for conducting experiments within the stipulated time.
2. Department has Full furnished State of Art laboratories with well-equipped equipment's which shall cater to all UG and PG courses as per curriculum requirements.
3. Conditions of chairs/benches are in good condition. Chair with desk areprovided for individual students in Labs.
4. Department has experienced faculty to educate them in all the fields of engineering.
5. All the labs are conducted and evaluated every week.
6. A list of Do's and Don'ts along with the experiments is displayed in the respective laboratories.
7. Labs are equipped with sufficient hardware and licensed software to runprogram specific curriculum and off program curriculum.
8. Laboratory manual are distributed to students.
9. Sufficient number of windows is available for ventilation and natural light andevery lab has one exit.
10. Lighting system is very effective, along with the natural light in every corner of the rooms.
11. Department has Servo Stabilizers of 5KVA in each lab
12. Department has two 20 KVA ups, WITH 240VDC Along with batteries is used in case of power failure in the labs provided with computers
13. The college having 2 generators 250KVA and 125KV capacity
14. Cup-boards are available in each lab for students to place their belongings.
15. Each Lab is equipped with white/black board and such other amenities.
16. Exclusively, a project lab has been provided for the students to carry out their mini and major project work.

fig.Electronics Devices and Circuits Laboratory.

Fig.2.Analog Circuities

flg.3. Signals and Systems Lab.

fig.4.Linear and Digital IC applications Lab

fig.5.Switching Theory and logic Design lab

fig.6.MPMC lab

fig.7.Analog and Digital Communication Lab

fig.8.VLSI lab

fig.9.Microwave and Optical communication Lab

fig.10.Internet of things Lab.

fig.11.Project Lab.

6.3 Safety measures in laboratories (10) Tota

Institute

Sr. No	Laboratory Name	Safety Measures
1	Electronics Devices and Circuits	The Laboratories are provided with Electrical Circuit Breakers & Servo Stabilizers to provided. Make circuit connections with all power sources turned off. Specific Safety Rules like Do's and Don'ts are displayed and instructed for all students. First aid box and fire extinguishers are kept in the laboratory. Students are supposed to wear Lab Apron. Well trained technical supporting staff monitor the lab at all times, Damaged equipment is identified and serviced at the earliest. List of Experiments are displayed in the laboratory. Provided Dispensary Room also any student can Emergency CCTV camera attached in all labs Maintain a clean and organized laboratory. Avoid the use of mobile phones in the laboratory.
2	Electronic and Circuits and Analysis	The Laboratories are provided with Electrical Circuit Breakers & Servo Stabilizers to provided. Make circuit connections with all power sources turned off. Specific Safety Rules like Do's and Don'ts are displayed and instructed for all students. First aid box and fire extinguishers are kept in the laboratory. Students are supposed to wear Lab Apron. Well trained technical supporting staff monitor the lab at all times, Damaged equipment is identified and serviced at the earliest. List of Experiments are displayed in the laboratory. Provided Dispensary Room also any student can Emergency CCTV camera attached in all labs Maintain a clean and organized laboratory. Avoid the use of mobile phones in the laboratory.
3	Signals and Systems	Guidelines and Instructions are displayed in the laboratory. First aid box, Fire extinguisher is kept in the laboratory Specific Safety Rules like Do's and Don'ts are displayed and instructed for all students. Students are supposed to wear Lab Apron. Well trained technical supporting staff monitor the lab at all times, Damaged equipment is identified and serviced at the earliest. Sign the log-out register before leaving the lab. Computers should be turned off properly before leaving the lab. Permission denied for pen drives. The student must check the computer unit and its peripherals attached before using it. The student must immediately inform the instructor if there's any defect, error or damage observed at the computer (hardware/software). CCTV camera attached in all labs. Avoiding the use of Mobile phones.
4	Switching Theory and Logic Design	The Laboratories are provided with Electrical Circuit Breakers & Servo Stabilizers to provided. Make circuit connections with all power sources turned off. Specific Safety Rules like Do's and Don'ts are displayed and instructed for all students. First aid box and fire extinguishers are kept in the laboratory. Students are supposed to wear Lab Apron. Well trained technical supporting staff monitor the lab at all times, Damaged equipment is identified and serviced at the earliest. List of Experiments are displayed in the laboratory. Provided Dispensary Room also any student can Emergency CCTV camera attached in all labs Maintain a clean and organized laboratory. Avoid the use of mobile phones in the laboratory.
5	Analog Circuits	The Laboratories are provided with Electrical Circuit Breakers & Servo Stabilizers to provided. Make circuit connections with all power sources turned off. Specific Safety Rules like Do's and Don'ts are displayed and instructed for all students. First aid box and fire extinguishers are kept in the laboratory. Students are supposed to wear Lab Apron. Well trained technical supporting staff monitor the lab at all times, Damaged equipment is identified and serviced at the earliest. List of Experiments are displayed in the laboratory. Provided Dispensary Room also any student can Emergency CCTV camera attached in all labs Maintain a clean and organized laboratory. Avoid the use of mobile phones in the laboratory.
6	Pulse and Digital Circuits	The Laboratories are provided with Electrical Circuit Breakers & Servo Stabilizers to provided. Make circuit connections with all power sources turned off. Specific Safety Rules like Do's and Don'ts are displayed and instructed for all students. First aid box and fire extinguishers are kept in the laboratory. Students are supposed to wear Lab Apron. Well trained technical supporting staff monitor the lab at all times, Damaged equipment is identified and serviced at the earliest. List of Experiments are displayed in the laboratory. Provided Dispensary Room also any student can Emergency CCTV camera attached in all labs Maintain a clean and organized laboratory. Avoid the use of mobile phones in the laboratory.
7	Analog Communication	The Laboratories are provided with Electrical Circuit Breakers & Servo Stabilizers to provided. Make circuit connections with all power sources turned off. Specific Safety Rules like Do's and Don'ts are displayed and instructed for all students. First aid box and fire extinguishers are kept in the laboratory. Students are supposed to wear Lab Apron. Well trained technical supporting staff monitor the lab at all times, Damaged equipment is identified and serviced at the earliest. List of Experiments are displayed in the laboratory. Provided Dispensary Room also any student can Emergency CCTV camera attached in all labs Maintain a clean and organized laboratory. Avoid the use of mobile phones in the laboratory.
8	Digital Communication	The Laboratories are provided with Electrical Circuit Breakers & Servo Stabilizers to provided. Make circuit connections with all power sources turned off. Specific Safety Rules like Do's and Don'ts are displayed and instructed for all students. First aid box and fire extinguishers are kept in the laboratory. Students are supposed to wear Lab Apron. Well trained technical supporting staff monitor the lab at all times, Damaged equipment is identified and serviced at the earliest. List of Experiments are displayed in the laboratory. Provided Dispensary Room also any student can Emergency CCTV camera attached in all labs Maintain a clean and organized laboratory. Avoid the use of mobile phones in the laboratory.
9	Digital Signal Processing	Guidelines and Instructions are displayed in the laboratory. First aid box, Fire extinguisher is kept in the laboratory Specific Safety Rules like Do's and Don'ts are displayed and instructed for all students. Students are supposed to wear Lab Apron. Well trained technical supporting staff monitor the lab at all times, Damaged equipment is identified and serviced at the earliest. Sign the log-out register before leaving the lab. Computers should be turned off properly before leaving the lab. Permission denied for pen drives. The student must check the computer unit and its peripherals attached before using it. The student must immediately inform the instructor if there's any defect, error or damage observed at the computer (hardware/software). CCTV camera attached in all labs. Avoiding the use of Mobile phones.
10	Linear Integrated Circuits and Analog Circuits	The Laboratories are provided with Electrical Circuit Breakers & Servo Stabilizers to provided. Make circuit connections with all power sources turned off. Specific Safety Rules like Do's and Don'ts are displayed and instructed for all students. First aid box and fire extinguishers are kept in the laboratory. Students are supposed to wear Lab Apron. Well trained technical supporting staff monitor the lab at all times, Damaged equipment is identified and serviced at the earliest. List of Experiments are displayed in the laboratory. Provided Dispensary Room also any student can Emergency CCTV camera attached in all labs Maintain a clean and organized laboratory. Avoid the use of mobile phones in the laboratory.
11	VLSI	Guidelines and Instructions are displayed in the laboratory. First aid box, Fire extinguisher is kept in the laboratory Specific Safety Rules like Do's and Don'ts are displayed and instructed for all students. Students are supposed to wear Lab Apron. Well trained technical supporting staff monitor the lab at all times, Damaged equipment is identified and serviced at the earliest. Sign the log-out register before leaving the lab. Computers should be turned off properly before leaving the lab. Permission denied for pen drives. The student must check the computer unit and its peripherals attached before using it. The student must immediately inform the instructor if there's any defect, error or damage observed at the computer (hardware/software). CCTV camera attached in all labs. Avoiding the use of Mobile phones.

12	Microprocessor and Micro Controller	Guidelines and Instructions are displayed in the laboratory. First aid box, Fire extinguisher is kept in the laboratory Specific Safety Rules like Do's and Don'ts are displayed and instructed for all students. Students are supposed to wear Lab Apron. Well trained technical supporting staff monitor the lab at all times, Damaged equipment is identified and serviced at the earliest. Sign the log-out register before leaving the lab. Computers should be turned off properly before leaving the lab. Permission denied for pen drives. The student must check the computer unit and its peripherals attached before using it. The student must immediately inform the instructor if there's any defect, error or damage observed at the computer (hardware/software). CCTV camera attached in all labs. Avoiding the use of Mobile phones.
13	Microwave Engineering	The Laboratories are provided with Electrical Circuit Breakers & Servo Stabilizers to provided. Make circuit connections with all power sources turned off. Specific Safety Rules like Do's and Don'ts are displayed and instructed for all students. First aid box and fire extinguishers are kept in the laboratory. Students are supposed to wear Lab Apron. Well trained technical supporting staff monitor the lab at all times, Damaged equipment is identified and serviced at the earliest. List of Experiments are displayed in the laboratory. Provided Dispensary Room also any student can Emergency CCTV camera attached in all labs Maintain a clean and organized laboratory. Avoid the use of mobile phones in the laboratory.
14	Internet of Things	Guidelines and Instructions are displayed in the laboratory. First aid box, Fire extinguisher is kept in the laboratory Specific Safety Rules like Do's and Don'ts are displayed and instructed for all students. Students are supposed to wear Lab Apron. Well trained technical supporting staff monitor the lab at all times, Damaged equipment is identified and serviced at the earliest. Sign the log-out register before leaving the lab. Computers should be turned off properly before leaving the lab. Permission denied for pen drives. The student must check the computer unit and its peripherals attached before using it. The student must immediately inform the instructor if there's any defect, error or damage observed at the computer (hardware/software). CCTV camera attached in all labs. Avoiding the use of Mobile phones.

6.4 Project laboratory (20) Tota

Institute

The primary purpose of the Project Laboratory in our Electronics and Communication Department is to provide the space and resources needed by students to complete, their main project and mini project work. The laboratory also serves as a meeting location for groups of students working on team projects. Most of the students are utilized this project laboratory to work on supplemental learning projects to enhance their understanding of class and lab assignments.

Utilization:

Students: Final year students analyze requirement, design software, implement, run, test

Faculty members: implement their research works in this lab.

Students: Final year students analyze requirements, design programs, implement, run, test

Faculty Members: Faculty members carry out their research work in this laboratory

S.No	Name of the Facilities	Utilization
1	Computers 15: System Configuration Windows 10.with Intel I5 Processor, 8 GB Ram	UG/PG students and Faculty members utilize for their mini Projects, projects, and research activities. 3 Sessions per week.
2	MAT Lab software in DSP lab – 15 user	UG/PG students and Faculty members utilize for their mini Projects, projects, and research activities.
3	VLSI – XILINX software in VLSI Lab – 15 user	UG/PG students and Faculty members utilize for their mini projects, projects, and research activities.
4	Keil micro vision software tool and Microcontroller 8051, MP kit in Microcontroller Lab	UG/PG students, Faculty members utilize for their mini projects, projects, and research activities
5	Antenna and microwave components in communication system Lab.	UG/PG students, Faculty members utilize for their mini projects, projects, and research activities
6	IOT Arduino, Thikercad Open source software	For UG students utilize the major and Mini Projects
7	Internet of 100Mbps and Wi-Fi of 35Mbps	UG/PG students, Research Scholars and Faculty members utilize the internet and Wi-Fi facility for their Project and research activities,

Academic Year wise (2019-2020)

S.No	Year	No.of projects	Title of the Projects
1	2019-20	47	Automatic Number Plate Identification And Recognition With Correlation Based Template Matching.
2			Blynk Based Smart Agriculture System Using Iot
3			Energy Efficiency In Manet
4			Rfid Based Ticketing System
5			Smart Street Lighting System Based On Vehicle Person Detection
6			Flood Alerting System Using Mqtt Protocol
7			Automated Grass Cutter Robot
8			Multistage Linear Feedback Shift Register With Reduced Decoding Logic In 130 Nm Cmos
9			Tissue Heterogeneity In Tumorigenic Cells Of Mammogram Image
10			Smart Irrigation System Using Iot
11			Automatic Vacuum Cleaner Robot
12			3d Sign Language Recognition Using Support Vector Machine
13			Design And Characteristics Of 32 Bit Kogge Stone Adder Using Fpgas
14			A Low Power High Speed Accuracy Controllable Approximate Multiplier Design
15			Rfid Based Smart Parking System
16			Smart Home Automation Using Mobile Applications
17			Electronic Voting Machine Using Matlab
18			3d Hand Gesture Using Adaptive Kernel Matching

19			Mobile Controlling Robot Fire Detection And Alert System
20			Fire Detection And Alarm System
21			Csrr Microstrip Antenna For Wireless Applications
22			Accelerometer Based Motion Detection And Alerting System
23			Automatic Threshold Based Image Segmentation
24			View Invariant Human Action Recognition From Skeleton Data With Support Vector Machine
25			Whether Monitoring And Automatic Alerting System
26			Bank Locker Security Alert System
27			Automatic Temperature Control Fan Using Lm35 Sensor
28			Free Roaming Obstacle Detection Robot
29			Alcohol Detection And Vehicle Ignition
30			Automatic Garbage Overflow Prevention System
31			Rectangular Slotted Microstrip Antenna For X-Band Applications
32			Secured Http Based Web Server For Home Appliances
33			Miniaturized Antenna For Satellite Communication
34			Speech Recognition Using Gaussian Mixture Model From Mfcc
35			Self Controlled Fire Fighting Robot
36			Isolation Improvement Using Mimo Antennas
37			Universal Object Detection Using Deep Learning In Matlab
38			Video Compression In H.264/Mpeg-4avc By Image Processing
39			Histogram Equalisation Based Colour Image Enhancement Without Changing Hue And Saturation
40			Brain Tumor Investigation With Mri Images
41			Virtual Telepresence Robot Using Raspberry Pi
42			Avoiding Fake Voting And Easy Polling By Using Arduino
43			Face Emotion Recognition Using Haar Cascade Classifier
44			Fake Currency Detection By Using Image Processing
45			Bluetooth Controlled Robot
46			Iot Based Water Level Detection System
47			Object Recognition Using Convolutional Neural Networks

Academic Year wise (2021-2022)

S.NO.	Year	No.Of projects	Title of the Projects
1	2021-2022	47	Vlsi Design And Implementation Of Electronic Voting Machine
2			Iot Weather Reporting Sysytem Using Raspberry Pi
3			Design And Performance Analysis Of Linear Array Microstrip Antenna With Mitered- Bends Feeding Network For X-Band Radar Applications
4			Multilayered Mimo For 5g Applications
5			Iot Based Vehicle Tracking System
6			Iot Connected Healthcare Applications

7			Triple-Band Uniform Circular Array Antenna For A Multi-Functional Radar Systm
8			Material Analysis Of Mems Sensor For Crash Sensor
9			A Compact Dual Band-Notched Mimo Diversity Antenna For Uwb Wireless Applications
10			Design Of Memo Sensor For Early Detection Of Sleep Apnea
11			Comparative Analysis Of Linear And Digitized Thermal Wave Imaging Method
12			Design Of Memo Sensor For Brain Wave Detection
13			Time Domain Based Compact Dual-Band Mimo Antenna System For Lte Smartphone Applications
14			Design Of Mems Sensor For Detection Of Defects In Slab
15			Checkerboard Ebg Surfaces For Wideband Radar Cross Section Reduction
16			Compact And Low-Profile Textile Ebg-Based Antenna For Wearable Medical Applications
17			A Compact Circularly Polarised Mimo Array Diversified Antenna For 5g Mobile Applications
18			Application Of Random Projection Transform To Pulse Phase Thermography
19			Iot Based Smart Traffic Signal Violation Detection System
20			Tri-Strip Monopole Antenna For Lte, Wlan And Wimax Communication Applications
21			Skeleton-Based Action Recognition Using Joint Surface Maps With Convolutional Networks
22			Vlsi Design Of Low Power And Area Efficient 8 Bit Comparator Using Mux- 6t Based For Communication System
23			Iot Based Smart Parking System
24			Design And Analysis Of Cpw Fed Antenna With Triangular Serrated Stub For Wireless Applications
25			Geometry Of Sriehakru Based On Fntetal Antenna
26			Design Of Mems Sensor For Detection Of Contaminants In Water
27			Smart Irrigation System Using IOT.
28			Iot Based Smart Waste Management System For Smart City
29			Mems Air Pressure Sensors For Green House Monitoring
30			The Efficient Design For Error Correction In Fault Tolerant Design Using Fpga.
31			Iot Based Smart Street Light System
32			Bio-Medical Curved Cpw-Fed Bandwidth Enhancement Antenna With Square Resonator With Split Ring
33			Covid-19 Face *Mask* Detection On Real-Time Video Stream
34			Cnn Approach For Biometric Human Identification Based On Fingerprint
35			Mqtt Based Monitoring System For Coal Mine Using Raspberry Pi
36			Chemical Analysis Using Mems Sensor
37			Smart Doorbell System Using Iot
38			Design And Implementation Of Home Automation Security System Using Fpga,
39			Car Parking System Using Fpga
40			Design And Implementation Of Two Speed Multiplier Using Fpga
41			Tri-Band Off-Body Antenna For Wban Communication
42			Speech Enhancement Using Adaptive Residual Conventional Neural Networks
43			Iot Based Home Monitoring System
44			A Novel Copper-Tape Wideband Wearable Antenna For Wban Application
45			Design And Performance Analysis Of 4:1 Multiplexer Using Multiple Logic Families At 180 Nm Technology
46			Hybrid Design Of Pseudo Random Number Generator Using Shift Register Fpga & Cmos Vlsi
47			Iot Based Forest Fire Alarm System

7 CONTINUOUS IMPROVEMENT (75) Total M

7.1 Actions taken based on the results of evaluation of each of the COs, POs & PSOs (30) Tota

Institute

POs Attainment Levels and Actions for Improvement- (2021-22)

POs	Target Level	Attainment Level	Observations
PO 1 : Engineering Knowledge			
PO 1	2.1	2.24	Target achieved, still there is scope for enhancing.
Action 1:As the target achieved for this batch, for forthcoming batch target set to 2.3 Action 2:Basic concepts were discussed frequently through extra-classes and also guest lecturers were planned for better understanding of concepts Action 3: Students who were facing difficulty in understanding the basics concept of science and mathematics are identified, and remedial classes are conducted to teach fundamental concepts.			
PO 2 : Problem Analysis			
PO 2	2.1	2.25	Target achieved, still there is scope for enhancing.
Action 1:As the target achieved for this batch, for forthcoming batch target set to 2.3 Action 2: More numerical problems will be Incorporated during their regular lectures. Action 3: Expert lectures were arranged which covers numerical problems and students were given additional assignments for problem solving capabilities in various courses. Action 4: Peer learning method advised to solidify their knowledge.			
PO 3 : Design/development of Solutions			
PO 3	2.1	2.17	Target achieved, still there is scope for enhancing.
Action 1:As the target achieved for this batch, for forthcoming batch target set to 2.2 Action 2: Students were encouraged to participate in various design and development workshop and events at national level to enhance their knowledge in design and development of product. Action 3: Conducted Hand-on workshops, seminars, and innovation competitions to gain knowledge on design solutions. Action 4: Encourage the students to participate in various technical events like paper presentations and publications to gain knowledge and instructed to include the design part in their mini project and final year project.			
PO 4 : Conduct Investigations of Complex Problems			
PO 4	2.1	2.17	Target attained to near specified target level. Students having difficulties reaching proper conclusion from data interpretation and research based knowledge.
Action 1:As the target achieved for this batch, for forthcoming batch target set to 2.2 Action 2: Students were encouraged to publish their investigation of complex problemsto peer reviewed journals/conferences. Action 3: Conducted guest lectures, workshops and conferences to improve research-based knowledge. Action 4: Conducted technical symposium to enhance and enrich the knowledge.			
PO 5 : Modern Tool Usage			
PO 5	2.1	2.16	Target achieved, still there is scope for enhancing.
Action 1:As the target achieved for this batch, for forthcoming batch target set to 2.2 Action 2: Conducted Hands-on Training program on MATLAB, HFSS, VLSI, and Internet of Things motivated to use Design/Analysis tools to enhance their technical skills into practice. Action 3: Institute industry collaborative events were conducted to enhance student's practical exposure on modern tool usage. Action4: Industrial MOU's Were signed with various industries to encourage students know about cutting edge technologies. Activities like industrial visit, internship and guest lecture further exposed students to advanced tools for Electronics and communications Engineering.			
PO 6 : The Engineer and Society			
PO 6	1.8	1.95	Target achieved, still there is scope for enhancing.
Action 1:As the target achieved for this batch, for forthcoming batch target set to 2 Action 2: Students are encouraged to participate in social activities like NSS, blood donation cap, etc. Action 3: To understand the safety concerns and social aspects, students underwent different safety related projects on IoT and communication to expand their practical knowledge with the effect of improved practices in engineering. Action 3: Students are encouraged to act as volunteer for the awareness programs on Energy Conservation and Waste to Energy Conversion Programs in rural areas. Action 4: To understand the safety concerns and social aspects, students are visited industries to expand their practical knowledge with the effect of improved practices in engineering.			
PO 7 : Environment and Sustainability			
PO 7	1.8	1.88	Target achieved, still there is scope for enhancing.
Action 1:As the target achieved for this batch, for forthcoming batch target set to 1.9 Action 2: Expert lectures will be planned to address environmental and sustainability issues in engineering. Action 3: Students were encouraged to do their project work in material & waste management, and environment-friendly materials.			
PO 8 : Ethics			
PO 8	1.8	1.35	Target not reached due to Students faced difficulties during COVID pandemic
Action 1:As the target was not achieved for this batch, target remains same for next batch as 1.8 Action 2: In the course Human values and professional ethics and IPR, more case studies and presentations are made to enhance ethical principles and exhibit high degree of professionalism. Action 3: Numerous Guest Lectures will be arranged on topics related to professional ethics education. Action 4: A career readiness program, motivational talks will be arranged to overcome the above observations.			
PO 9 : Individual and Team Work			
PO 9	1.8	2.18	Target achieved, still there is scope for enhancing.
Action 1:As the target achieved for this batch, for forthcoming batch target set to 2.2 Action 2: Students are mentored and guided to do projects for various social and real time issues. Action 3: More sessions of soft-skill training are given to the students. Action 4: Students are motivated to participate in various club activities both as individuals and as team members in a group. Action 5: Students are motivated to organize the seminars, workshop, symposium and conferences			
PO 10 : Communication			
PO 10	1.8	1.93	Target achieved, still there is scope for enhancing.
Action 1:As the target achieved for this batch, for forthcoming batch target set to 1.9 Action 2: Students are trained to write effective reports and make effective presentations on their projects. Action 3: Students have seamlessly encouraged participating in class room presentations and national/international conferences. Action 4: Students are encouraged to publish their research work in journal/conferences. Action 5: Seminars and training programs will be arranged for students for enhancing their communication and presentation skills. Action 6: Soft skills training is imparted to students to enhance various aspects of communication/technical talks by group discussions, presentations and new learning outcomes.			
PO 11 : Project Management and Finance			
PO 11	1.8	1.88	Target achieved, still there is scope for enhancing.
Action 1:As the target achieved for this batch, for forthcoming batch target set to 1.9 Action 2: The cost estimation has included as a part of the project assessment that helps the students to improve the knowledge of project management and finance. Action 3: Leadership qualities will be inculcated to students by allowing them to participate in project expo and other technical events. Action 4: The awareness created among the student regarding the management principles and managing projects.			
PO 12 : Life-long Learning			
PO 12	1.8	1.97	Target achieved, still there is scope for enhancing
Action 1:As the target achieved for this batch, for forthcoming batch target set to 2 Action 2: Library hours are properly utilized by monitoring the students to ensure the effective use of journals, Magazines, Technical articles, Reference Books, NPTEL videos, and MOOCs..etc. Action 3: Internet facilities are provided to students to update the recent technological developments and emerging trends in the industries and society. Action 4: Students will be motivated/ passionate to pursue higher studies.			

PSOs Attainment Levels and Actions for Improvement- (2021-22)

PSOs	Target Level	Attainment Level	Observations
PSO 1 : An ability to isolate and solve complex problems in the domain of Electronics and Communication by selecting appropriate hardware and software tools.			
PSO 1	2.1	2.12	Target achieved, still there is scope for enhancing.
Action 1:As the target achieved for this batch, for forthcoming batch target set to 2.15 Action 2: Apart from the regular classes, guest lectures will be arranged on both hardware and software tools. Action 3: Seminars will be arranged to motivate the students, and exhorted Mentor/mentee meetings frequently.			
PSO 2 : An ability to design, develop and validate inter disciplinary products, process by applying the knowledge and skills of Signal Processing, Embedded Systems, VLSI, Networking and Communication Engineering.			
PSO 2	2.1	2.08	Target has not met but it reached to nearest value target level.
Action 1:As the target was not achieved for this batch, target remains same for next batch as 2.1 Action 2: Students were instructed to include the design part in their mini project and final year project. Action 3: The design and modeling of the various test systems will be discussed and verified using MATLAB simulation tools. Action 4: Students are encouraged to do renewable energy source based projects to gain more practical exposure.			

7.2 Academic Audit and actions taken thereof during the period of Assessment (15) Tota

Institute

The purpose of the academic audit is to evaluate the performance of the various departments, and appreciated their achievements and give suggestions for further improvement in the quality of teaching, research, administration, curricular, and extra-curricular activities. It is to assess the academic performance of the both individual faculty and the whole department.

Academic audit has two types namely internal and external.

Internal Academic Audit:

Internal audit is an in-house operation for self-introspection. It evaluates at the end of the each semester. Academic audit team is assigned by the principal on the recommendations of convenor of the academic audit committee.

Following documents are verified at the time of audit.

- Syllabus Coverage
- Question Bank of all courses
- Counselling files
- Attendance Registers
- Course files of both Theory & Lab
- Class teacher file
- Department files

The audit team verifies all the documents and submits the report to audit committee. The academic audit committee convener prepares the consolidated report along with recommendations and submits to the principal. The principal implement all the recommendations through Internal Quality Assurance Cell (IQAC).

External Academic Audit:

External audit has more reliability. It evaluates after the completion of the each academic year. Institute invites two professors from the prominent institutes.

Following documents are verified at the time of audit.

- Curricular Aspects
- Teaching-Learning and Evaluation
- Research and Innovation
- Student Progression
- Curricular, and extra-curricular activities

The audit team verifies all the documents and prepares and submits the non-compliance report along with the suggestions to principal. The principal implement all the feasible suggestions through IQAC.

7.3 Improvement in Placement, Higher Studies and Entrepreneurship (10) Tota

Institute

A. Improvement in Placement numbers, quality, core hiring industry and pay packages
B. Improvement in Higher studies performance in GATE, GRE, GMAT, CAT, etc. and admissions in premier institutions.
C. Improvement in number of Entrepreneurs

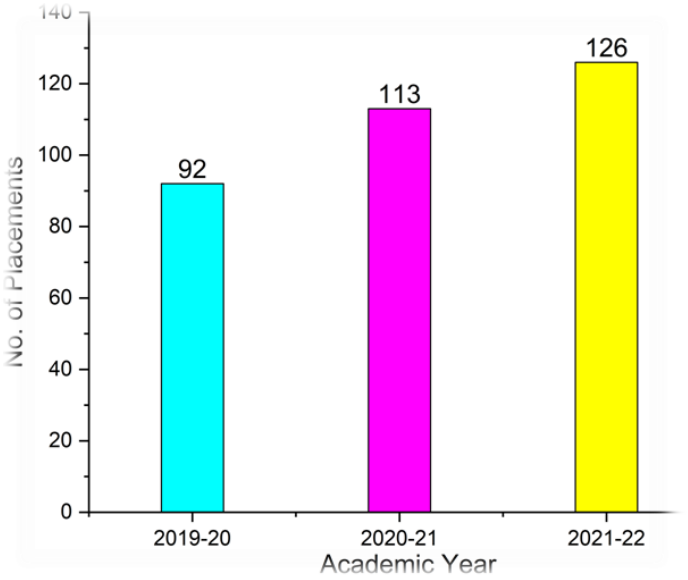
A. **Improvement in Placement numbers, quality, core hiring industry and pay packages**

Table 7.3.1 No. of Placements & No. of Companies Recruited

S.NO	Academic Year	No. of Companies Recruited	Avg CTC P.A	No. of Placements	No of Core Companies	No. of IT companies
1	2019-20	24	2.9125	92	4	20
2	2020-21	16	3.7705	113	1	15
3	2021-22	20	4.1190	126	2	18

Table 7.3.2 No. of Placements in Three Academic Years

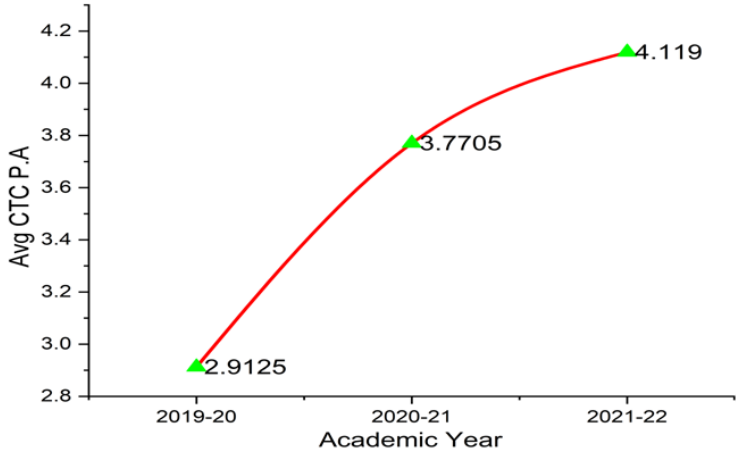
S.NO	Academic Year	No. of Placements
1	2019-20	92
2	2020-21	113
3	2021-22	126



b. Quality of Placements: Minimum, Maximum and Average Salary

7.3.3 Quality of Placements

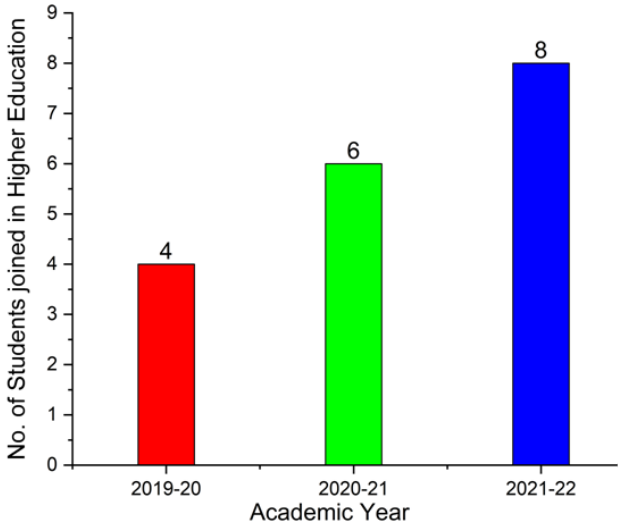
Department of ECE - Placement SALARY Summary			
Year	2019-20	2020-21	2021-22
Minimum Salary	1.8 LPA	2.5 LPA	3.25 LPA
Maximum Salary	4.5 LPA	7.0 LPA	9.0 LPA
Average Salary	2.9125 LPA	3.7705 LPA	4.1190 LPA



B. Improvement in Higher studies performance in GATE, GRE, GMAT, CAT, etc. and admissions in premier institutions.

7.3.2 No. of Students joined in Higher Education

S no.	Academic Year	No. of Students joined in Higher Education	No. of students admitted through GATE, PGECET	No. of Students opted for Higher studies Abroad
1	2021-22	8	6	2
2	2020-21	6	2	4
3	2019-20	4	1	-



Observations:

1. Number of students getting placed is increased.
2. The average salary offered per annum is increasing consistently which indicates that the quality of placements has been increased over these years.
3. There has been an increasing awareness among students to pursue higher studies. The number of students going for higher studies is increasing consistently.

7.4 Improvement in the quality of students admitted to the program (20) Tota

Institute

Item		2022-23	2021-22	2020-21
National Level Entrance Examination	No of students admitted	0	0	0
JEE Mains	Opening Score/Rank	0	0	0
	Closing Score/Rank	0	0	0
State/ University/ Level Entrance Examination/ Others	No of students admitted	198	198	191
APEAPCET	Opening Score/Rank	13202	13978	21086
	Closing Score/Rank	70076	66357	57346
Name of the Entrance Examination for Lateral Entry or lateral entry details	No of students admitted	18	19	18
APECET	Opening Score/Rank	676	1261	862
	Closing Score/Rank	2332	3474	1741
Average CBSE/Any other board result of admitted students(Physics, Chemistry&Maths)		70.35	73.83	75.63

8 FIRST YEAR ACADEMICS (50) Total M

8.1 First Year Student-Faculty Ratio (FYSFR) (5) Tot

Institute

Please provide First year faculty information considering load

Name of the faculty member	PAN No.	Qualification	Date of Receiving Highest Degree	Area of Specialization	Designation	Date of joining	Teaching load (%)			Currently Associated (Yes / No)	Nature Of Association (Regular / Contract)	Date Of leaving(In case Currently Associated is 'No')
							CAY	CAYm1	CAYm2			
Y VEDASREE	AJUPY2895E	MA	30/05/2008	English	Assistant Professor	28/09/2020	100	100	100	Yes	Regular	
V.PRABHAKAF	AJHPV0671N	MA	30/11/2010	English	Assistant Professor	28/09/2020	100	100	100	Yes	Regular	
T.JHANSI LAK	CMIPD6983M	MA	30/12/2008	English	Assistant Professor	01/06/2019	100	100	100	Yes	Regular	
M.PUSHPAVAT	CWXPM3431L	MA	30/06/2011	English	Assistant Professor	01/06/2019	100	100	100	Yes	Regular	
M.SANDHYA F	BCXPM6029F	MA	30/04/2005	English	Assistant Professor	28/09/2020	100	100	100	Yes	Regular	
V.MADHAVA R	BIGPM8430B	MA	30/01/2016	English	Assistant Professor	17/09/2022	100	0	0	Yes	Regular	
A.SUHASINI	BHAPA4544D	MA	31/05/2013	English	Assistant Professor	27/01/2020	100	100	100	Yes	Regular	
M.RAVEENDR	AYYPR2687L	M.Sc	30/10/2007	Mathematics	Assistant Professor	08/08/2011	100	100	100	Yes	Regular	
S.V.S.PHANEE	CMYPS2805K	M.Sc	30/04/1998	Mathematics	Assistant Professor	28/09/2020	100	100	100	Yes	Regular	
G.PAVANI	AYVPG7080R	M.Sc	30/04/2008	Mathematics	Assistant Professor	25/11/2021	100	100	0	Yes	Regular	
J.SEETHA	JODPS8648N	M.Sc	30/04/2018	Mathematics	Assistant Professor	01/09/2022	100	0	0	Yes	Regular	
Dr.V.HIMAMAH	AXQPV3208G	M.Sc. and PhD	30/05/2018	Physics	Associate Professor	17/10/2019	100	100	100	Yes	Regular	
N.NARASIMHA	ATGPN3113Q	M.Phil	05/02/2012	Physics	Assistant Professor	01/06/2018	100	100	100	Yes	Regular	
K.SRIRANJAN	DSHPK9325L	M.Sc	23/04/2007	Physics	Assistant Professor	17/10/2019	100	100	100	Yes	Regular	
M.JANARDHA	AHSPJ8480G	M.Sc	30/04/2005	Physics	Assistant Professor	17/05/2015	100	100	100	Yes	Regular	
Dr.M MALLI KA	CGWPM7867E	M.Sc. and PhD	29/07/2017	Environmental Sciences	Associate Professor	20/11/2017	100	100	100	Yes	Regular	
Dr.P.GIDYONU	CVTPP7014B	M.Sc. and PhD	06/03/2021	Chemistry	Assistant Professor	01/09/2021	100	100	0	Yes	Regular	
Dr.CH.VINUTH	AVZPV4660K	M.Sc. and PhD	29/01/2018	Chemistry	Associate Professor	05/04/2019	100	100	100	Yes	Regular	
CH.DV .SAI KU	BFJPC8845N	M.Sc	30/11/2015	Chemistry	Assistant Professor	19/09/2019	100	100	100	Yes	Regular	
B.KOTESH BA	BFOPB5835E	M.Sc	30/04/2003	Chemistry	Assistant Professor	18/12/2017	100	100	100	Yes	Regular	
B.ESWARI	BLSPB9968C	M.Sc	30/04/2011	Chemistry	Assistant Professor	28/09/2019	100	100	100	Yes	Regular	
S.LAKSHMI	CBCPG9870R	M.Sc	30/04/2004	Chemistry	Assistant Professor	01/11/2012	100	100	100	Yes	Regular	
M.HIMABINDU	CVOPM1277Q	M.Sc	30/04/2011	Chemistry	Assistant Professor	20/10/2021	100	100	0	Yes	Regular	
T.NAGENDRA	EVKPR4332D	M.Sc	30/12/2006	Chemistry	Assistant Professor	03/04/2020	100	100	100	Yes	Regular	
G.HARIPRIYA	BPMPG9604Q	M.Sc	30/04/2004	Chemistry	Assistant Professor	18/11/2022	100	0	0	Yes	Regular	
Mr.P. Sreehari	BBWPP1598J	M.E/M.Tech	06/01/2012	CSE	Assistant Professor	03/05/2014	100	100	100	Yes	Regular	
Miss.M. Dedee	CYCPK7632N	M.E/M.Tech	05/01/2018	CSE	Assistant Professor	15/06/2018	100	100	100	Yes	Regular	
K.Anusha	BAPPK2246C	M.E/M.Tech	02/01/2016	CSE	Assistant Professor	01/09/2021	100	100	0	Yes	Regular	
I.Meghana	AEAPI9420C	M.E/M.Tech	12/01/2020	CSE	Assistant Professor	18/10/2021	100	100	0	Yes	Regular	
S.Visweswara	EQIPS6158B	M.E/M.Tech	12/01/2017	CSE	Assistant Professor	06/01/2020	100	100	100	Yes	Regular	
J.Krishna Kish	JXZPK7024M	M.E/M.Tech	12/01/2012	CSE	Assistant Professor	17/06/2020	100	100	100	Yes	Regular	
Y. Sivaiah	AUTPY4534C	M.E/M.Tech	11/01/2021	CSE	Assistant Professor	12/06/2021	100	100	0	Yes	Regular	

D. Venkata Srir	CIUPD0964L	M.E/M.Tech	11/01/2021	CSE	Assistant Professor	12/06/2021	100	100	0	Yes	Regular	
P V Madhusud	BHSPP5372G	M.E/M.Tech	12/01/2012	CSE	Assistant Professor	07/10/2017	100	100	100	Yes	Regular	
M.Rajasekhar	DBOPM0341G	M.E/M.Tech	20/03/2019	EEE	Assistant Professor	03/03/2020	100	100	100	Yes	Regular	
M.Saramma	NRIPS7663R	M.E/M.Tech	15/03/2020	EEE	Assistant Professor	01/08/2020	100	100	100	Yes	Regular	
D.Balaram Rec	BJJPD4900M	M.E/M.Tech	20/03/2015	EEE	Assistant Professor	03/03/2020	100	100	100	Yes	Regular	
S.Sreenu	GBKPS6548L	M.E/M.Tech	10/11/2013	EEE	Assistant Professor	20/08/2020	100	100	100	Yes	Regular	
P.Pedababu	BGBPG9945A	M.E/M.Tech	07/07/2018	EEE	Assistant Professor	20/08/2020	100	100	100	Yes	Regular	
D. Syam Kuma	BSQPD4184H	M.E/M.Tech	30/01/2017	MECHANICAL ENGINERRING	Assistant Professor	28/09/2020	100	100	100	Yes	Regular	
K. Suresh Babı	DCAPK6527B	M.E/M.Tech	21/07/2008	MECHANICAL ENGINERRING	Assistant Professor	08/09/2020	100	100	100	Yes	Regular	
T.ANUSHA	AJMPT8181A	M.E/M.Tech	23/11/2013	ECE	Assistant Professor	21/10/2021	100	100	0	Yes	Regular	
Dr.K. Rajasekh	DGNPK0635M	ME/M. Tech and PhD	05/03/2022	MECHANICAL ENGINERRING	Assistant Professor	08/09/2020	100	100	100	Yes	Regular	
CH.MANASA	BCOPC1422P	M.E/M.Tech	10/08/2017	ECE	Assistant Professor	01/10/2021	100	100	0	Yes	Regular	
T.RAMAIAH	AJAPT9596P	M.E/M.Tech	30/03/2015	ECE	Assistant Professor	23/11/2015	100	100	100	Yes	Regular	
U.MANJULA	DGEPM5547K	M.E/M.Tech	13/05/2017	ECE	Assistant Professor	22/03/2021	100	100	0	Yes	Regular	
P.KIRAN BABU	AVHPP8016F	M.E/M.Tech	28/12/2013	ECE	Assistant Professor	28/09/2020	100	100	100	Yes	Regular	
D KAVITHA	FJRPD1413F	M.E/M.Tech	10/08/2018	CIVIL ENGINEERING	Assistant Professor	22/11/2019	100	100	0	Yes	Regular	
Dr.P.RAMESH	ANSPP0160B	M.A and Ph.D	31/07/1996	English	Assistant Professor	28/09/2020	0	100	100	No	Regular	02/07/2022
M.RAMA KOTA	CNBPM8008E	M.Sc	30/04/2010	Chemistry	Assistant Professor	28/09/2020	0	100	100	No	Regular	30/09/2022
Dr.M RAVI KUI	BWYPM5407N	M.Sc. and Ph.D. (Chemistry)	03/08/2015	Chemistry	Professor	28/09/2020	0	0	100	No	Regular	31/08/2021
M.Kranthi	ATUPM7900N	M.E/M.Tech	12/02/2013	CSE	Assistant Professor	05/01/2018	0	0	50	No	Regular	30/04/2021
Dr.P.BRAHMAI	AYBPB6195Q	M.Sc. and PhD	01/08/2019	Zoology	Associate Professor	28/09/2020	100	100	100	Yes	Regular	
B.MALLIKARJI	ANQPB4659M	M.Sc	30/04/1998	Mathematics	Assistant Professor	01/06/2019	100	100	100	Yes	Regular	
G.Subbarao	AJWPG3711B	M.E/M.Tech	18/05/2014	CSE	Assistant Professor	13/08/2018	100	100	100	Yes	Regular	
M.KALYANI	CTTPK5698G	M.Sc	08/02/2021	Mathematics	Assistant Professor	12/07/2021	100	100	0	Yes	Regular	
E.SIVA SAI	ADJPE1928R	M.Sc	02/09/2020	Mathematics	Assistant Professor	28/09/2020	0	0	100	No	Regular	31/07/2021
Dr.C.PAVAN KI	CSVPP4823M	M.Sc. and PhD	10/08/2016	Mathematics	Associate Professor	28/09/2019	0	0	100	No	Regular	05/07/2021
Dr.B.PURNA C	BJYPP1806P	M.Sc. and PhD	31/07/2012	Physics	Professor	04/12/2017	0	0	50	No	Regular	31/05/2021
A.MURALI KRI	AICPA9358B	MA	30/05/1997	English	Assistant Professor	28/09/2020	50	50	50	No	Regular	31/12/2022
Ms.AJP. SUVA	BGOPA3773P	MA	31/03/2006	English	Assistant Professor	03/08/2020	100	50	50	Yes	Regular	
Dr.S.RAMA MC	EQBPS2574G	M.Sc. and PhD	21/12/2019	Mathematics	Associate Professor	03/09/2022	100	0	0	Yes	Regular	
T RAVINDRAN	AKCPT3054H	M.Sc	28/02/2015	Physics	Assistant Professor	01/06/2019	100	100	100	Yes	Regular	
Dr.K.LAKSHMI	BTVPK0162L	M.Sc. and PhD	31/01/2017	Mathematics	Associate Professor	31/01/2017	100	100	100	Yes	Regular	
Dr.Endluri Venk	AAPPE4392N	ME/M. Tech and PhD	30/12/2020	CSE	Associate Professor	05/06/2017	100	100	100	Yes	Regular	
Dr.L KRISHNA	ADJPL5146L	M.Sc. and PhD	30/05/2015	Mathematics	Professor	08/01/2018	0	100	100	No	Regular	30/09/2022
T.V SIVA NAGA	BCVPT7431A	M.Sc	30/04/2011	Mathematics	Assistant Professor	16/10/2020	100	100	100	Yes	Regular	

CH.RATNA RA	AMKPC0569J	MA	31/03/1994	English	Assistant Professor	26/10/2020	100	50	50	Yes	Regular	
Dr.B.HARI BAE	ATZCB0248F	M.Sc. and PhD	13/06/2022	Mathematics	Assistant Professor	20/07/2009	100	100	100	Yes	Regular	
A.SIVA RAM P	AWOPA7459D	M.Sc	13/04/2013	Mathematics	Assistant Professor	02/09/2013	100	50	100	Yes	Regular	
V BALA GURA	GAGPR6914E	M.Sc	30/04/2018	Mathematics	Assistant Professor	28/09/2020	50	50	50	Yes	Regular	
B.MAHALAKA	BGCPB0519G	M.Sc	30/04/2016	Mathematics	Assistant Professor	28/09/2020	100	50	100	Yes	Regular	
R.KAVYA	HSNPK2265R	M.Sc	30/06/2022	Mathematics	Assistant Professor	03/09/2022	100	0	0	Yes	Regular	
G.RAMESH BA	AUJPG7243E	M.Sc	30/04/2005	Physics	Assistant Professor	03/03/2012	100	100	100	Yes	Regular	
Dr.SD.RAFI	DWXPS1602A	M.Sc. and Ph.D. (Chemistry)	09/06/2022	Chemistry	Assistant Professor	22/12/2021	100	100	0	Yes	Regular	
SD.NOUSHEE	HVLPS8403J	M.Sc	30/06/2020	Chemistry	Assistant Professor	10/11/2020	100	100	100	Yes	Regular	
O SRI ROOPA	ACIPO2890G	M.Sc	30/04/2008	Chemistry	Assistant Professor	08/10/2022	100	0	0	Yes	Regular	
M. Anusha	CWAPM3041D	M.E/M.Tech	19/12/2016	MECHANICAL ENGINERRING	Assistant Professor	28/12/2016	100	100	100	Yes	Regular	
Dr.UDAYABHA	BZHPP6688J	ME/M. Tech and PhD	14/10/2020	ECE	Assistant Professor	02/09/2019	100	100	0	Yes	Regular	
T VENKATA PF	AUNPT0627K	M.E/M.Tech	04/10/2022	CIVIL ENGINEERING	Assistant Professor	14/10/2022	100	0	0	Yes	Regular	
N VEERANJAI	ALSPN1594P	MA	30/04/2010	English	Associate Professor	01/05/2018	0	50	100	No	Regular	22/04/2022
K.BALA CHAN	APAPB4859D	M.Sc	28/04/2006	Mathematics	Assistant Professor	19/09/2013	0	100	100	No	Regular	16/08/2022
K.GURAVA RE	BCSPK6664D	M.Sc	30/04/2008	Chemistry	Assistant Professor	05/01/2016	0	100	100	No	Regular	30/09/2022
Dr.M.GANAPA	ASQPG8287K	M.Sc. and PhD	30/06/2018	Mathematics	Associate Professor	07/01/2019	0	0	100	No	Regular	22/07/2021
CH.KOTI REDI	AITPC0590Q	M.Sc	28/04/2006	Mathematics	Assistant Professor	17/10/2013	50	50	50	Yes	Regular	
K.SUBBA RAC	CKMPK5853K	M.Sc	30/11/2010	Mathematics	Assistant Professor	06/03/2014	50	50	50	Yes	Regular	
A.NAGAMALLI	ASLPA8302Q	M.Sc	28/08/2007	Mathematics	Assistant Professor	01/06/2019	100	50	100	Yes	Regular	
E.NARASAMM	AAZPE0839J	M.Sc	30/04/2007	Mathematics	Assistant Professor	01/06/2018	50	50	50	Yes	Regular	
CH.V.SUBRAM	BDXPC8524L	M.Sc	31/03/2008	Mathematics	Assistant Professor	25/11/2021	50	50	0	No	Regular	31/01/2023
Mr.M.Venkata I	GKOPP8634K	M.E/M.Tech	01/04/2019	CSE	Assistant Professor	04/09/2019	100	100	100	Yes	Regular	
K.MADHU BAE	DTKPK6602J	MA	30/04/2013	English	Assistant Professor	28/09/2020	0	0	100	No	Regular	30/08/2021
SK.NAZER HU	KQKPS8352D	MA	31/12/2009	English	Assistant Professor	02/09/2019	0	0	100	No	Regular	30/08/2021
B.VEERASHAI	BBWPB1382E	M.Sc	30/04/2007	Mathematics	Assistant Professor	03/08/2019	0	0	100	No	Regular	30/08/2021
L.SRINIVAS	ALFPL1306E	M.Sc	30/04/2007	Mathematics	Assistant Professor	03/08/2019	0	0	100	No	Regular	30/08/2021
B.Thirumalarac	CLZPB5877N	M.E/M.Tech	01/08/2018	CSE	Assistant Professor	01/09/2018	0	50	100	No	Regular	06/06/2022
V.VENKATA RA	AYVPV7786P	M.Sc	30/04/2007	PHYSICS	Assistant Professor	28/10/2020	0	0	100	No	Regular	30/08/2021
K.CHINA DEVI	DMIPK7448M	MA	30/04/2011	English	Assistant Professor	02/09/2019	100	100	100	Yes	Regular	
T.Silpa	BKEPT2774F	MA	31/12/2018	English	Assistant Professor	02/09/2019	100	60	100	Yes	Regular	
B.Ayyappa jyot	BLUPB4226M	MA	31/12/2018	English	Assistant Professor	02/09/2019	100	100	100	Yes	Regular	
A.RAJU	BFXPA9896P	M.Sc	30/04/2016	Physics	Assistant Professor	02/09/2019	100	100	100	Yes	Regular	
K.SRINIVASUL	BKIPK5360A	M.Sc	30/04/1997	Mathematics	Assistant Professor	10/01/2013	0	50	50	Yes	Regular	

Year	Number Of Students(approved intake strength) N	Number of Faculty members(considering fractional load) F	FYSFR (N/F)	*Assessment=(5*20)/FYSFR(Max.5)
2020-21(CAYm2)	1020	74	14	5
2021-22(CAYm1)	1020	76	13	5
2022-23(CAY)	1140	79	14	5
Average	1060	76	13	5

AverageFYSFR: 0.00

Assessment [(5 * 15) / AverageFYSFR]: 5.00

8.2 Qualification of Faculty Teaching First Year Common Courses (5) Total Marks 3.67

Institute Marks : 3.67

Year	x (Number Of Regular Faculty with Ph.D)	y (Number Of Regular Faculty with Post graduate Qualification)	RF (Number Of Faculty Members required as per SFR of 20:1)	Assessment Of Faculty Qualification [(5x + 3y) / RF]
2020-21	7	45	51	3.00
2021-22	9	55	51	4.00
2022-23	10	60	57	4.00

Average Assessment: 3.67

8.3 First Year Academic Performance (10) Total Marks 7.57

Institute Marks : 7.57

Academic Performance	CAYm1(2021-22)	CAYm2(2020-21)	CAYm3 (2019-20)
Mean of CGPA or mean percentage of all successful students(X)	6.92	7.61	7.98
Total Number of successful students(Y)	197.00	191.00	193.00
Total Number of students appeared in the examination(Z)	195.00	189.00	192.00
API [X*(Y/Z)]	6.99	7.69	8.02

Average API[(AP1+AP2+AP3)/3] : 7.57

Assessment = Average API : 7.57

8.4 Attainment of Course Outcomes of first year courses (10) Total Marks 10.00

8.4.1 Describe the assessment processes used to gather the data upon which the evaluation of Course Outcomes of first year is done (5) Institute Marks : 5.00

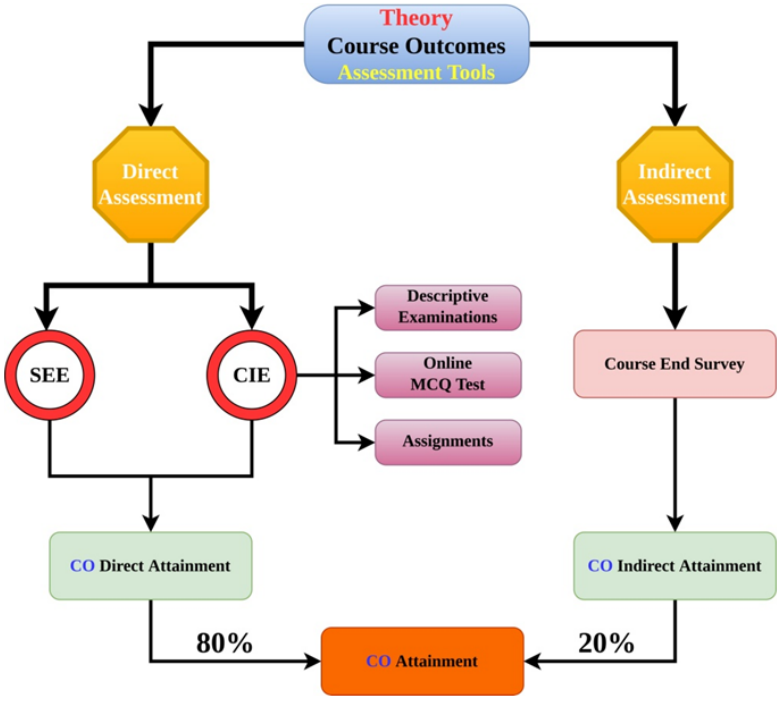
For the Evaluation of attainments CO's both direct and indirect assessment methods are used. The 80% weightage is considered for direct assessment which includes internal assessments (like Mid-examinations, Assignments, Day to Day Evaluations, etc) and Semester end examinations. The remaining 20% weightage is based on course-end survey.

Internally developed excel spreadsheets are used for direct assessment. Feedback forms based on CO's were framed for each class and the feedback was taken from students for indirect assessment.

CO attainment process

The first year curriculum comprises of various types of courses like Theory Courses, Laboratory Courses, and Mandatory courses.

Theory Attainment Process



Theory:

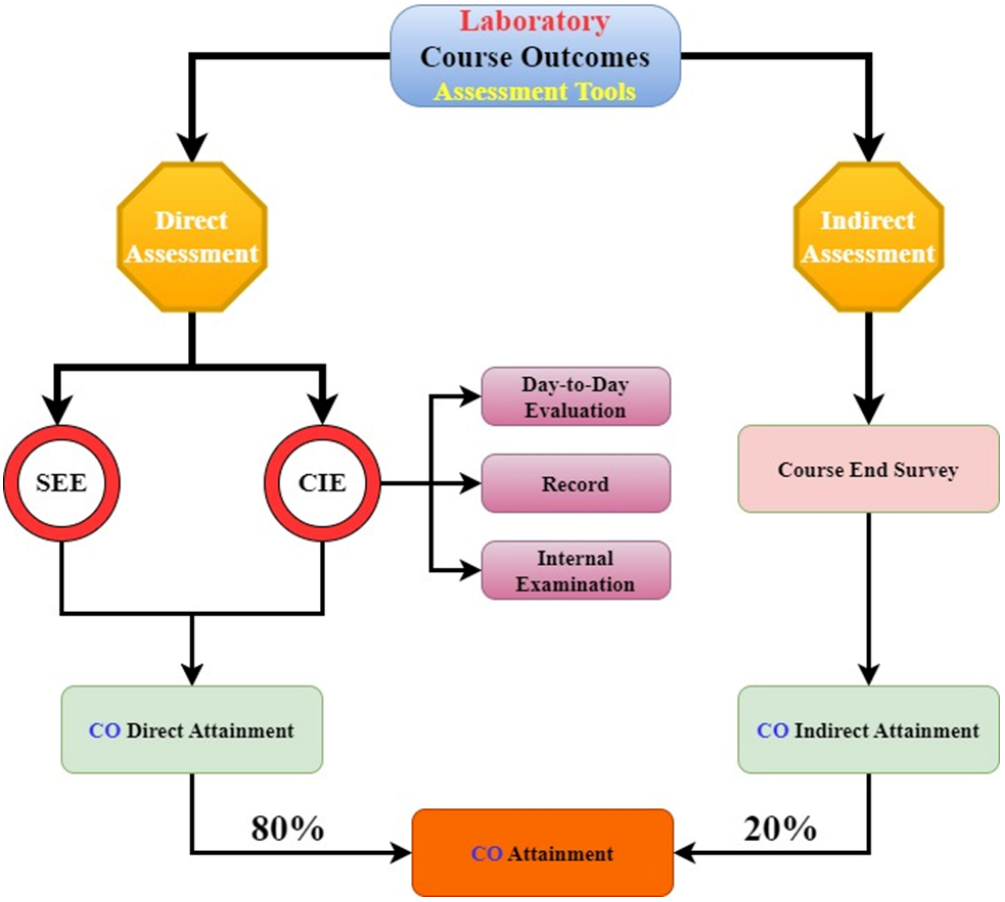
Mid-Examinations: Two mid-examinations are conducted for each semester. Mid-examinations serve to encourage students to keep up with course content covered. The Mid examination is of 90 minutes for 15 marks. The questions are framed in such a way that they should map Bloom's taxonomy, whereas each question is mapped to the respective course outcomes, which was evaluated based on the set attainment levels. The Multiple choice questions of 10 marks is also evaluated in both mid's of each course.

Assignments: Students are assigned course-related work and their submissions are evaluated on the basis of work quality. A total of 2 assignments are given per course where each assignment carries 5 Marks.

Semester-End Examination: The semester-end examination is 180 minutes of 70 marks duration and covers the entire syllabus of the course. The questions are framed in such a way that they should satisfy Bloom's taxonomy, where as each question is mapped to the concurred course outcomes of the course. The CO's are evaluated based on the set attainment levels.

All direct assessment such as Mid-examinations, Assignments & Semester end examinations covers 80% of weightage and Indirect assessment consists of a course-end survey which comprises 20% of weightage.

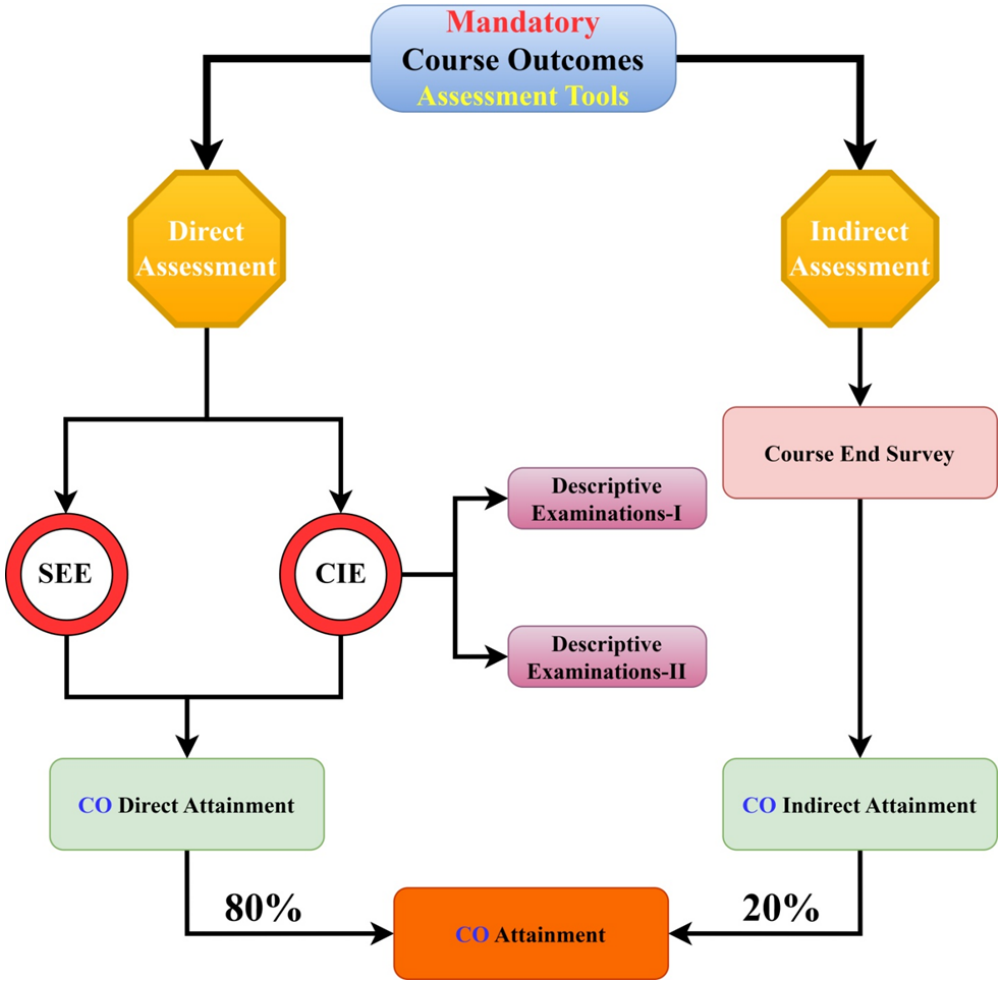
Laboratory Attainment Process:



Laboratory Courses:

For a total of 50 marks, continuous internal evaluation is 15 marks which comprises mainly day-to-day evaluation (5 marks), Record (5 marks), Internal Examinations (5 marks) and Semester end examinations of 35 marks which cover 80% weightage of laboratory assessment and remaining 20% weightage for course end survey.

Mandatory Course Attainment Process:



Mandatory Courses:

For a total of 100 marks, continuous internal evaluation is 30 marks which comprise two descriptive examinations, and Semester end examinations of 70 marks are conducted. All direct assessment covers 80% of weightage and Indirect assessment consists of a course-end

survey which comprises 20% of weightage.

Course End Survey is collected at the end of course from the students about their attainment level of COs.

Feedback is collected with closed ended questions with options as

4- Excellent

3- Very Good

2- Good

1-Average

0-Poor

There response will be converted into percentage

$$\%\ \text{of attainment} = \frac{\sum \text{Grade} \times \text{Number of responses to that grade}}{\text{Total respnses}} \times 100$$

Depending on the level of attainment grade was decided as mentioned below.

% of attainment	Grade
More than or equal to 80%	3
More than or equal to 70% and less than 80%	2
More than or equal to 60% and less than 70%	1
Less than 60%	0

8.4.2 Record the attainment of Course Outcomes of all first year courses (5) Institute Marks : 5.00

As the 2021 admitted batch was introduced with new R21 regulations, the threshold for internal and external exams was calculated based on the previous two batches (2019& 2020) pass percentages in the course having the same/similar syllabus.

For 2018 admitted batch

2019 admitted & 2020 admitted batch average pass percentage	Internal Threshold	External Threshold
Less than 50%	55	40
More than or equal to 50% and less than 60%	57.5	42.5
More than or equal to 60% and less than 70%	60	45
More than or equal to 70% and less than 80%	62.5	47.5
More than or equal to 80%	65	50
If the course does not exist in R18	60	45

The percentage of students who secured more than the threshold was calculated. Grades were given on the % of students who secured more than the threshold value

Percentage of students secured more than the threshold	Grade
More than or equal to 80%	3
Less than 80% and more than or equal to 70%	2
Less than 70% and more than or equal to 60%	1
Less than 60%	0

Depending upon the percentage of students secured more than the threshold, the next batch threshold was decided by the same course as follows.

Next batch threshold for internal courses:

% of students secured more than the threshold value	Action
More than or equal to 95% and less than 100%	Change Threshold to Min (Present batch Thresold+10%, 70)
More than or equal to 90% and less than 95%	Change Threshold to Min (Present batch Thresold+7.5%,70)
More than or equal to 85% and less than 90%	Change Threshold to Min (Present batch Thresold+5%,70)
More than or equal to 80% and less than 85%	Change Threshold to Min (Present batch Thresold+2.5%,70)
Less than 80%	No Change in the threshold is required.

8.5 Attainment of Program Outcomes from first year courses (20) Total Marks 20.00

8.5.1 Indicate results of evaluation of each relevant PO and/or PSO if applicable (10)

Institute Marks : 10.00

POs Attainment:

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C101	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	0.40	1.65	PO11	1.68
C102	2.45	2.50	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C103	2.26	2.15	1.78	0.91	PO5	PO6	PO7	PO8	PO9	PO10	PO11	1.24
C104	2.34	2.68	1.89	PO4	2.64	2.00	2.04	1.79	2.00	1.10	3.00	2.71
C105	1.94	1.84	1.74	1.67	1.61	PO6	PO7	PO8	PO9	0.08	0.69	0.65
C106	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	2.00	2.67	PO11	PO12
C107	3.00	2.00	2.00	2.00	PO5	PO6	PO7	PO8	PO9	PO10	PO11	1.50
C108	3.00	3.00	PO3	3.00	2.00	2.00	2.00	PO8	PO9	PO10	PO11	2.00
C109	0.65	0.76	1.00	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	0.85
C110	1.22	1.27	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C111	1.50	0.73	0.83	0.52	0.52	0.97	0.94	PO8	PO9	PO10	PO11	PO12
C112	1.43	1.43	0.95	1.43	PO5	PO6	PO7	PO8	PO9	PO10	PO11	0.75
C113	0.82	0.96	0.78	0.82	PO5	0.37	PO7	PO8	PO9	PO10	PO11	0.46
C114	1.68	PO2	PO3	2.52	1.68	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C115	3.00	2.80	2.60	3.00	3.00	PO6	PO7	PO8	PO9	PO10	PO11	2.80
C116	3.00	3.00	2.75	2.25	PO5	1.50	PO7	PO8	PO9	PO10	PO11	1.50

PO Attainment Level

PSOs Attainment:

Course	PSO1	PSO2
C101	PSO1	0.40
C102	0.88	PSO2
C103	1.07	0.86
C104	PSO1	PSO2
C105	1.57	1.50
C106	PSO1	PSO2
C107	1.75	1.50
C108	PSO1	2
C109	PSO1	PSO2
C110	PSO1	PSO2
C111	0.81	0.99
C112	0.95	0.95
C113	0.64	0.32
C114	PSO1	PSO2
C115	2.20	2.60
C116	2.33	2.00

PSO Attainment Level

Course	PO1	PO2
Direct Attainment	1.36	1.31
PSO Attainment	1.36	1.31

8.5.2 Actions taken based on the results of evaluation of relevant POs and PSOs (10)

Institute Marks : 10.00

POs Attainment Levels and Actions for Improvement- (2021-22)

POs	Target Level	Attainment Level	Observations
PO 1 : Engineering Knowledge			
PO 1	1.5	2.02	Target achieved, still there is scope for enhancing.
Action1: To organize lectures (both online and offline) by renowned scientists explaining basic sciences to students. Action2: To explain and discuss real life examples where engineering fundamentals have been used for solving complex problems. Action 3:Basic concepts were discussed frequently through extra-classes and also guest lectures were planned for better understanding of concepts			
PO 2 : Problem Analysis			
PO 2	1.5	1.93	Target achieved, still there is scope for enhancing.
Action1: To write review of famous books on basic and engineering sciences Action2: To give more home assignments for the purpose of enhancing understanding of subjects Action 3: Peer learning method advised to solidify their knowledge.			
PO 3 : Design/development of Solutions			
PO 3	1.5	1.63	Target achieved, still there is scope for enhancing.
Action1: The students are prompted to organize seminars and workshops to better understand engineering problems and provide appropriate solutions Action2: To provide alternate solutions to various engineering problems Action 3: Encourage the students to participate in various technical events like paper presentations and publications to gain knowledge and instructed to include the design part in their mini project and final year project.			
PO 4 : Conduct Investigations of Complex Problems			
PO 4	1.5	1.81	Target achieved, still there is scope for enhancing.
Action1: Performed extra activities with students for better and deeper understanding of the subject. Action2: Students gave power-point presentations on selected research papers for better synthesis and critical analysis of the information provided. Action 3: Students were encouraged to publish their investigation of complex problems to peer reviewed journals/conferences. Action 4: Conducted guest lectures, workshops and conferences to improve research-based knowledge			
PO 5 : Modern Tool Usage			
PO 5	1.5	1.91	Target achieved, still there is scope for enhancing.
Action1: Students are prompted to attend virtual sessions of leading universities and technical institutions on complex problems faced by the world and their prospective solutions. Action2: Students are encouraged to use design thinking approach for providing alternate solutions to the selected engineering problems.			
PO 6 : The Engineer and Society			
PO 6	1.5	1.37	Target not reached
Action 1:Students are encouraged to critically analyze the classroom lectures and reading material and not just be the passive recipients of information Action 2: Students are encouraged to act as volunteer for the awareness programs on Energy Conservation and Waste to Energy Conversion Programs in rural areas. Action 4: To understand the safety concerns and social aspects, students are visited industries to expand their practical knowledge with the effect of improved practices in engineering.			
PO 7 : Environment and Sustainability			
PO 7	1.5	1.66	Target achieved, still there is scope for enhancing.
Action1: To provide understanding of how sustainable development is the need of hour Action2: To inform students about practical approaches for achieving sustainable development while solving critical engineering problems			
PO 8 : Ethics			
PO 8	1.5	1.79	Target achieved, still there is scope for enhancing.
Action1: To make students aware of how they can solve major problems using various engineering approaches but at the same time being ethically, morally and socially responsible. Action 2: Numerous Guest Lectures will be arranged on topics related to professional ethics education.			
PO 9 : Individual and Team Work			
PO 9	1.5	1.47	Target is not achieved, still there is scope for enhancing.
Action 1: Students are made aware of how crucial it is to work in a team and how to ensure that while doing so, both individual and team goals are met. Action 2: Students are motivated to participate in various club activities both as individuals and as team members in a group. Action 3: Students are motivated to organize the seminars, workshop, symposium and conferences			
PO 10 : Communication			
PO 10	1.5	1.37	Target not reached
Action1: Students were asked to visit some local area, identify the engineering problems they face, propose solutions, and document the same as a research report. Action2: Students were asked to give group power-point presentation for further assessment of the project undertaken.			
PO 11 : Project Management and Finance			
PO 11	1.5	1.84	Target achieved, still there is scope for enhancing.
Action1: Students are given semester long group projects and are assessed on the basis of their individual and team performance metrics. Action2: Students are to discuss real life case studies of how management has helped successful engineers in solving critical and complex engineering problems			
PO 12 : Life-long Learning			
PO 12	1.5	1.47	Target is not achieved, still there is scope for enhancing.
Action1: The students are prompted to learn various advances in technology and how they are required to stay employable in the present day dynamic and competitive global environment. Action2: The students are to take some recent technological advancement and explain in a presentation how they have revolutionized the world.			

PSOs Attainment Levels and Actions for Improvement- (2021-22)

PSOs	Target Level	Attainment Level	Observations
PSO 1 : An ability to isolate and solve complex problems in the domain of Electronics and Communication by selecting appropriate hardware and software tools.			
PSO 1	1.5	1.36	Target not reached
Action1:Apart from the regular classes, guest lectures will be arranged on both hardware and software tools. Action2:Seminars will be arranged to motivate the students, and exhorted Mentor/mentee meetings frequently.			
PSO 2 : An ability to design, develop and validate inter disciplinary products, process by applying the knowledge and skills of Signal Processing, Embedded Systems, VLSI, Networking and Communication Engineering.			
PSO 2	1.5	1.31	Target not reached
Action1:: Students were instructed to include the design part in their mini project and final year project. Action2:The design and modeling of the various test systems will be discussed and verified			

9 STUDENT SUPPORT SYSTEMS (50)

Total Marks 50.00

9.1 Mentoring system to help at individual level (5)

Total Marks 5.00

Institute Marks : 5.00

A mentoring system can be an effective way to provide support and guidance at the individual level. Here are some key steps to implementing a successful mentoring system at PACE Institute of Technology & Sciences:

i. All faculty and students are divided into mentor-mentee for every semester.
ii. Mentoring of the students is our top priority.
iii. Each mentor has been assigned 15-20 mentees in the same department. They would look into assigned students' academic progress, and participation in co-curricular & extracurricular activities.
iv. At a minimum, mentors and mentees should meet regularly at least one hour per month.

Academic Guidance

i. Academic guidance is an essential component of academic success that can help students achieve their academic goals by providing support, advice, and resources. Whether it involves course selection, study skills, academic planning, career planning, or academic support, academic guidance can provide students with the tools they need to succeed academically.
ii. Sharing information on academic planners, academic schedules, and e- learning resources. Students with poor attendance are identified and it is ensures that they improve their attendance by getting counselled in presence of a HoD and mentor representatives.
iii. For a slow learner, mentor representative focuses mainly on their studies with the support of additional reading materials, model questions along with solutions.

Professional Guidance

i. The department are well equipped with knowledgeable human resources in the form of members of faculty who by keeping themselves updated of developments offer guidance to the prospective professionals in addition to the classroom teaching.
ii. Professional guidance is an essential component of career development that can help individuals achieve their career goals by providing support, advice, and resources. Whether it involves career exploration, career planning, skill development, networking, or job search strategies, professional guidance can provide individuals with the tools they need to succeed in their chosen careers.

Career Advancement

i. Career advancement is an important component of professional success that can provide individuals with opportunities for growth, satisfaction, financial rewards, recognition, and networking. By developing new skills, gaining experience, taking on new responsibilities, and pursuing opportunities for growth and development, individuals can advance their careers and achieve their professional goals.
ii. Encourage the students to take up online certification courses in order to build their careers.

Laboratory specific

i. It's important to provide specific details about the students laboratory work, including the day to day evaluation, lab record updating, and research works the tasks they have been involved in, and any additional responsibilities they have taken on. This can help future mentors or employers understand the students laboratory experience and potential for future success in the field.
ii. Irregular students in laboratory classes are counselled to attend regularly and complete backlog experiments during specified extra hours.

All-round Development

i. An all-round development mentoring system should prioritize the needs and goals of individuals, and provide a supportive and nurturing environment for personal, academic, and professional growth.
ii. This institution puts forward effort to realize all-round development and guides the student accordingly. In addition to academics, the students are encouraged to participate in literature, cultural, and sports activities which help to develop leadership qualities, decision-making abilities, team spirit, and socio-psychological awareness.

9.2 Feedback analysis and reward /corrective measures taken, if any (10)

Total Marks 10.00

Institute Marks : 10.00

Student feedback analysis involves gathering and analyzing feedback from students in order to improve teaching, learning, and the overall student experience. Here are some steps for conducting a student feedback analysis:

Collect Feedback

Feedbackcollected from the students using surveys, focus groups, or other methods. Make sure to ask specific questions that will provide useful information for improving teaching and learning.

i. Twice a semester the feedback on all courses in collected. Along with that, department and institutional-level feedback also will be collected on facilities, the conduction of co-curricular and extracurricular activities, and maintenance of discipline in the department.
ii. The course end survey will be collected to understand the student level of course attainment.
iii. Feedback has been taken from the outgoing students as a part of the student exist survey to understand the student PO and PSO attainment status.
iv. Feedback on the curriculum and syllabus has been collected once a year from all the stakeholders
v. Student satisfaction survey will be collected once a year from all the students on Teaching Learning Evaluation.
vi. Staff exit survey is collected from the staff while he/she relieves the institution.

Analysis and Report Preparation

i. Analysing and preparing a report on a student feedback system is a valuable process that can help identify areas of strength and areas for improvement, and provide recommendations for enhancing the overall student experience.
ii. The faculty who get less than the threshold percentage of 70% are asked to give an explanation and corrective measures are taken by the HoD for improvement.
iii. The student feedback is also given weightage in the staff appraisal form.
iv. Student course end survey is used as an indirect tool for the course outcomes attainment.
v. The student exit survey uses as an indirect tool for POs, and PSOs attainment.
vi. The stakeholder feedback is utilized for framing the curriculum and syllabus.
vii. The student satisfaction survey is used for the suggestion in the TLE process.
viii. Staff exist survey is used for the improvement institution and is useful for the increase in the retention of staff.

Reward / Corrective Measures Taken

Head of the department analyzes the feedback of each faculty and will take necessary actions. Following things are considered for reward/correction measures

i. Induction programs are conducted for newly joined faculty members and continuing education programme for the experienced faculties. Those faculty who have not obtained good appraisals have a detailed discussion with the Head of the department on how to improve the teaching.
ii. Level of feedback is taken into account while evaluating the staff of promotion.
iii. Student feedback is one of the mandatory roles in the faculty award scheme.
iv. All the faculty members are evaluated yearly in even and oddsemesters considering their contributions towards academic, research and administration.
v. Class committee meeting shall be conducted twice in every semester for each class. Committee members includes Head of the department, Academic Coordinator, class teacher, two faculty members teaching in the respective class, two student members from the class.

9.3 Feedback on facilities (5) Total Marks 5.00

Institute Marks : 5.00

The feedback on the facilities has been initiated by the institute. The lab and library facility, training & placement facilities and general facilities will be rated by students via a survey conducted. This feedback helps to identify areas that need improvement and make improvements together with students.

i. **Teaching & Learning, Facilities / Activities, Curriculum, Career guidance / Employability (Student Exit Survey)**

Student Exit Survey

Dear students,

We would grateful if you could fill out and submit the following exit survey. We assure you that your feedback will be treated confidentially for our continuous improvement.

Name of the student : **Branch :**

Mobile No : **Email :**

Questionnaire	Excellent (5)	Very good (4)	Good (3)	Satisfactory (2)	Poor (1)
Teaching & Learning					
Teaching & learning methods adopted were					
Overall quality of teaching & learning activities in the college is					
The learning materials and resources provided were					
Facilities / Activities					
Infrastructure, Lab facilities & Library					
Students mentoring and guidance					
Internet / wifi facility					
Extracurricular activities					
Safety & Security					
Curriculum					
The curriculum of the program is well designed and promotes learning experience of the students					
Employability is given focus in the curriculum design					
The curriculum incorporates the recent technological					

ii. **Parents feedback**

FEEDBACK FROM PARENTS

a) Name of the Parent :

b) Present Address :

Phone Number :

Email-ID :

c) Name of the Student :

d) Branch and Year :

e) Please provide your comments on the following:

1. College Infrastructure : □ Excellent(4) □ Good(3) □ Average(2) □ Fair(1)
2. Teaching imparted to your ward : □ Excellent(4) □ Good(3) □ Average(2) □ Fair(1)
3. Department Resources : □ Excellent(4) □ Good(3) □ Average(2) □ Fair(1)
4. Faculties helpfulness : □ Excellent(4) □ Good(3) □ Average(2) □ Fair(1)
5. Library Facilities : □ Excellent(4) □ Good(3) □ Average(2) □ Fair(1)
6. Computing and Internet Facilities : □ Excellent(4) □ Good(3) □ Average(2) □ Fair(1)
7. Sports, Extra Curricular Facilities : □ Excellent(4) □ Good(3) □ Average(2) □ Fair(1)
8. Personality/Communications Skills Development Facilities : □ Excellent(4) □ Good(3) □ Average(2) □ Fair(1)
9. Placement Opportunities : □ Excellent(4) □ Good(3) □ Average(2) □ Fair(1)
10. Transport Facilities : □ Excellent(4) □ Good(3) □ Average(2) □ Fair(1)
11. Mess/Canteen Facilities : □ Excellent(4) □ Good(3) □ Average(2) □ Fair(1)
12. Feedback on ward's Progress : □ Excellent(4) □ Good(3) □ Average(2) □ Fair(1)
13. Discipline standards in the College : □ Excellent(4) □ Good(3) □ Average(2) □ Fair(1)
14. Overall rating of the College : □ Excellent(4) □ Good(3) □ Average(2) □ Fair(1)

e) Your Positive/Negative Comments:

f) Your suggestions for the Improvement of the Institution/Department:

Date: Signature.

9.4 Self-Learning (5) Total Marks 5.00

Institute Marks : 5.00

A. Scope for self-learning

Self-learning refers to the process of acquiring knowledge or skills through independent study, research, and practice, without the guidance or supervision of a teacher or instructor.

PACE Institute of Technology & Sciences provides some of the areas where self-learning can be particularly useful include:

- Academic subjects
- Technical skills
- Life skills
- Extracurricular activities

B. The institution needs to specify the facilities, materials for learning beyond syllabus, Webinars, Podcast, MOOCs etc. and demonstrate its effective utilization

Providing facilities, materials, and opportunities for learning beyond the syllabus is essential for promoting self-learning and ensuring that students are well-prepared for their future careers.

PACE Institute of Technology & Sciences provides some steps that institutions can take to specify and demonstrate the effective utilization of these resources:

- Self-learning courses under the category of elective courses wherein the students are provided with the flexibility of choosing courses available in online portals like MOOCs and popular e-learning portals like NPTEL SWAYAM, Spoken tutorials, EduSkills, Codetantra, NASSCOM, Coursera, Infosys Spring Board, CISCO, Microsoft Certification courses etc…
- To enable the students to effectively utilization the library and to motivate for self-learning weekly one library hour is allocated in the timetable.

9.5 Career Guidance, Training, Placement (10) Total Marks 10.00

Institute Marks : 10.00

A. Availability of career guidance facilities

Career guidance facilities are essential for students to make informed decisions about their future careers and to develop the skills and knowledge necessary to achieve their goals.

PACE Institute of Technology & sciences can make some ways of career guidance facilities available to their students:

- Soft skill training programmes from first year onwards
- Training on employability skills.
- Online tests to assess the students.
- Conduct of motivation lectures and mock interviews
- Technical training & guest lectures
- Enabling the students to resume preparation
- Arranging customized industry– oriented training
- Entrepreneurship and higher studies awareness programs
- Conduct of mock interviews.

B. Counseling for higher studies (GATE/GRE, GMAT, etc.)

Counseling for higher studies is an essential service that institutions can offer to their students who are considering pursuing advanced degrees or further education.

PACE Institute of Technology & sciences provides some ways in which institutions can provide counseling for higher studies:

- Workshops and Seminars
- Mock tests
- Practice materials
- Online Courses
- Personalized Coaching

C. Pre-placement training

Pre-placement training is a crucial service that institutions can offer to their students to help them prepare for job interviews and employment opportunities.

PACE Institute of Technology & sciences provides some ways in which institutions can provide pre-placement training:

- Resume building
- Interview skills training
- Soft skills training
- Online resources

D. Placement process and support

The placement process can be a challenging experience for students. Institutions can provide critical support to students by maintaining a company and job database, setting up a dedicated placement cell, offering career counseling, providing interview preparation services, and leveraging their alumni network.

PACE Institute of Technology & sciences provides some ways in which institutions can offer support to their students in the placement process:

- Company and job database
- Placement cell
- Career counseling
- Interview preparation
- Alumni network

9.6 Entrepreneurship Cell

Total Marks 5.00

Institute Marks : 5.00

A. Entrepreneurship initiatives

Entrepreneurship initiatives are a critical aspect of an institutions support system for students who want to start their own businesses.

PACE Institute of Technology & Sciences provides some ways in which institutions can offer entrepreneurship initiatives:

- Invited motivational talks
- Awareness programs on new business avenues
- Celebration of world's Entrepreneurship day
- Entrepreneurship courses
- Funding opportunities
- Guest lecture/Workshops with MOU companies

B. Data on students benefitted

S.No	Academic Year	Number of Entrepreneurs
1	2021-2022	2
2	2020-2021	3
3	2019-2020	4

9.7 Co-curricular and Extra-curricular Activities

Total Marks 10.00

Institute Marks : 10.00

A. Availability of sports and cultural facilities

Availability of sports and cultural facilities is an important aspect of an institutions support system for students.

PACE Institute of Technology & sciences provides some ways in which institutions can provide sports and cultural facilities:

i. Sports facilities: A variety of sports facilities such as outdoor and indoor sports fields, and fitness centers. These facilities can be used for a range of sports activities such as cricket, football, basketball, badminton, Volleyball, and more.

ii. Sports events: organize sports events such as intercollegiate tournaments, intra-college matches, and sports meets. These events can provide students with opportunities to showcase their skills and compete with other institutions.

iii. Cultural facilities: Institutions can offer facilities for cultural activities such as music, dance, drama, and other performing arts. These facilities can include theaters, and auditoriums etc

iv. Cultural events: Institutions can organize cultural events such as music festivals, dance competitions, and drama competitions.

B. NCC, NSS and other clubs

NCC and NSS are both student organizations that operate in PACE Institute of Technology & sciences.

· The National Cadet Corps (NCC) is a youth development movement that aims to train young people in discipline, leadership, and patriotism through military-style training.

· The National Service Scheme (NSS) is a community service program that encourages students to participate in various activities that contribute to the development of society. The NSS aims to develop the personality of students through community service, promote national integration and social harmony, and encourage students to work towards the betterment of society. NSS activities may include tree planting, blood donation camps, health and hygiene campaigns, and awareness programs on social issues.

· Clubs and societies: Institutions can establish and support clubs and societies for sports and cultural activities. These clubs and societies can provide students with opportunities to meet other students who share similar interests and engage in sports and cultural activities together.

C. Annual student's activities

Annual student activities are an important part of the academic calendar in PACE Institute of Technology & sciences. These activities provide students with opportunities to showcase their talents, develop new skills, and build their confidence.

PACE Institute of Technology & sciences conducts some common annual student activities:

· Annual sports day
· Cultural festival
· Science fair
· Debate competition
· Quiz competition
· Annual day celebration
· Charity events
· Talent show
- Career fair

10 GOVERNANCE, INSTITUTIONAL SUPPORT AND FINANCIAL RESOURCES (120) Total Marks 120.00

10.1 Organization, Governance and Transparency (55) Total Marks 55.00

10.1.1 State the Vision and Mission of the Institute (5) Institute Marks : 5.00

Vision:

Our vision is to impart futuristic technical education transforming the students technically superior, ethically strong and self disciplined to serve the nation as a valuable resource.

Mission:

M1	To inculcate quality education by implementing innovative teaching-learning methods and state-of-the-art facilities.
M2	To enrich the intellectual know-how, credibility and integrity of the students to necessitate industry.
M3	To recognize as scholarly and influential leaders in engineering education, to develop human power with creativity, advanced technology and passion for the betterment of future nation.

To realize the vision, the above mission statements have been established by taking into account, the contemporary Industry requirements, Technical skills needed, Technological & Product development, Ongoing research & development, Industry-Institute interaction, Twenty-first century skills and Societal needs.

To sensitize all the stakeholders about availability of the Vision and Mission statements, display boards and Sign boards are arranged in the prominent locations across the campus. In addition to this, Vision and Mission statements are made available to the stakeholders through:

- Institute website
- Principal Chamber
- Each of the departments
- Library
- Institute-level documents
- All major central facilities

10.1.2 Availability of the Institutional Strategic Plan and its Effective Implementation and Monitoring (25) Institute Marks : 25.00

PACE Institute of Technology and Sciences has formulated a dynamic strategic plan to achieve the Institutional Goals in this competitive world. Strategic Plan includes the targets and the strategies to achieve the targets. The plan is formulated based on the SWOC analysis of the institute. All the staff are fully committed to deliver high quality standards to the students by continuous learning and enhancing their skills.

The following are the targets that the strategic plan has identified for the upcoming years:

STRATEGIC PLAN IDENTIFIES THE FOLLOWING ROAD TARGETS FOR AY 2018-2028

- Implementation of Outcome Based Education.
- Establish at least 2 Research Centers by 2023.
- To attain NAAC A++ grade during 2nd Cycle Accreditation.
- To be ranked among TOP 200 engineering institutions in NIRF Ranking.
- To secure TOP 50 position in ARIIA Ranking 2025.
- Promote industry-institution collaboration with top MNCs.
- Establish Centers of Excellence in various departments.
- Incubate successful start-ups creating innovative products and business models using the knowledge and technologies developed by the Institution.
- Provide an invigorating work environment for faculty and staff.
- Improve the involvement of alumni in all the aspects of Institutions development by collaborating with them in placements, guest lecture, mentoring students in various projects, mentoring incubate, research and development, consultancy.
- Collaboration with various industries in the field of Research & Development and consultancy.
- Collaboration with Institutions around the world to promote quality higher education and for supporting students/faculty exchange programmes.

In view of achieving the above strategic plan the following key strategic issues are focused:

Create an institutional culture which equips the students with the skills required for the industry

- Training programs are conducted for improving the communication skills and interpersonal skills from the first year onwards.
- Induction program is conducted for the students in the first year.
- Motivational programs are being conducted by the industry experts and successful alumni.
- Offers minors degree with inter-disciplinary open electives
- Internships for hands-on experience and community service are encouraged for the students.
- Student chapters are established for professional bodies and continuous activities are organized under the student chapters to enhance the leadership qualities.
- Entrepreneur Development Cell (EDC) works continuously to promote entrepreneurship.
- Add-on courses on latest technologies are conducted to enhance the placement opportunities.
- Students are encouraged to complete self-learning courses through MOOCs/Swayam NPTEL.

Continuous capacity building of the faculty and Promoting research culture among the students and faculty:

- Faculty development programs are organized by inviting subject experts from premier institutions and industry to enhance their technical skills and research skills.
- Training on course design, question paper setting and teaching pedagogy in-line with OBE philosophy are being conducted.
- All the faculty are encouraged to attend ATAL FDPs to improve their skills and expertise in latest technologies.
- Encouraging faculty members and students to participate in workshops, conferences and seminars by providing financial support
- Incentives for quality journal publications and sponsored research projects are given.
- Encouragement to pursue the Ph.D. (Part time, Full time) by providing support in terms of research facilities and academic leaves.
- Students are encouraged to participate in innovative project contests
- Students were encouraged to develop prototypes and apply for Patents

10.1.3 Governing body, administrative setup, functions of various bodies, service rules, procedures, recruitment and promotional policies (10) Institute Marks : 10.00

Governing body: Governing body is formulated to coordinate with all Academic and Administrative activities of the college.

Term: The Governing Body shall be reconstituted every three years except in the case of UGC nominee who shall have a term of five years.

Meetings: Meetings of the Governing Body shall be held at least twice a year.

Functions of the Governing Body: Subject to the existing provision in the bye-laws of respective college and rules laid down by the state government/parent university, the Governing Body shall:

- Guide the college while fulfilling the objectives for which the college has been granted autonomous status.
- Institute scholarships, fellowships, studentships, medals, prizes and certificates on the recommendations of the Academic Council
- Approve new programmes of study leading to degrees and/or diplomas.
- All recruitments of Teaching Faculty/Principal shall be made by the Governing Body/state government as applicable in accordance with the policies laid down by the UGC and State Government from time to time.
- To approve annual budget of the college before submitting the same at the UGC.
- Perform such other functions and institute committees, as may be necessary and deemed fit for the proper development of the college

Members of Governing Body:

S. No	Details of the Member	Representative in GB
1	Sri. M. Venu Gopala Rao Chairman, Srinivasa Educational Society	Chairman, Management
2	Sri. M. Sridhar Secretary & Correspondent, Srinivasa Educational Society	Member, Management
3	Sri. M. Vasu Babu Vice-Chairman, Srinivasa Educational Society	Member, Management
4	Smt. M. Padma Treasurer, Srinivasa Educational Society	Member, Management
5	Sri. M. Ravindra Joint Secretary, Srinivasa Educational Society	Member, Management
6	Dr. R.N. Yadav Professor, Dept of ECE, NIT, Bhopal	Member-UGC Nominee
7	Dr. S. Narayana Reddy Principal, SVU College of Engineering, Tirupati, AP	Member- State Govt. Nominee
8	Dr. Ch. Srinivas Rao Professor in ECE, UCEN, JNTUK, Kakinada	Member- University Nominee
9	Sri P. Siva Prasad CEO, Mydentistchoice.Com, Hyderabad	Member- Industrialist
10	Sri K.V.C Krishna Chartered Accountant, Flat No. 103, B-Block, Pavani Homes, Hyderabad	Special Invitee
11	Dr. G. V. K. Murthy Principal, PACEITS	Member- Ex-Officio
12	Dr. R. Veeranjaneyulu, Prof in CSE, PACE ITS	Member - Teacher
13	Dr. T. Mary Jones Professor & Head, Dept. of MBA, PACEITS	Member - Teacher

Academic Council:

Academic Council is formulated to approve the course structure and syllabus formulated by Board of Studies and monitors the overall performance of the institution. It comprises members nominated by JNTUK and Governing body, Principal, Deans and Head of the Departments. The body meets twice a year.

Functions:

- To scrutinize and approve the proposals with or without modification of the boards of studies with regard to courses of study, academic regulations, curricula, syllabi and modifications thereof, instructional and evaluation arrangements, methods, procedures relevant thereto etc., provided that where the Academic Council differs on any proposal, it will have the right to return the matter for reconsideration to the Board of Studies concerned or reject it, after giving reasons to do so.
- To make regulations regarding the admission of students to different programs of study in the college keeping in view the policy of the Government.
- To make regulations for sports, extra-curricular activities, and proper maintenance and functioning of the playgrounds and hostels.
- To recommend to the Governing Body proposals for the institution of new programs of study.
- To recommend to the Governing Body institution of scholarships, studentships, fellowships, prizes, and medals, and to frame regulations for the award of the same.
- To advise the Governing Body on suggestions(s) pertaining to academic affairs made by it.
- To perform such other functions as may be assigned by the Governing Body.

Members:

The Academic Council consists of the following members,

1. The Principal (Chairman)

2. All the Heads of Departments in the college

3. Four teachers of the college representing different categories of teaching staff by rotation on the basis of seniority of service in the college.

4. Not less than four experts/academicians from outside the college representing such areas as

Industry, Commerce, Law, Education, Medicine, Engineering, Sciences etc., to be nominated by the Governing Body.

5. Three nominees of the university not less than Professors.

6. A faculty member nominated by the Principal (Member Secretary).

Term: The tenure of nominated members shall be three years.

BOARD OF STUDIES:

A Board of Studies is formulated for each department to prepare the course structure and syllabus. They monitor regularly the performance of the department. They meet at least twice for a year and guide the department respectively.

Functions and Responsibilities

- To prepare syllabi for various courses keeping in view the objectives of the college, interest of the stakeholders, and national requirements for consideration and approval of the Academic Council
- To suggest methodologies for innovative teaching and evaluation techniques
- To suggest panel of names to the Academic Council for appointment of examiners
- To coordinate research, teaching, extension and other academic activities in the department/college.

In addition to internal members BoS consist of external members as mentioned below:

- One Expert from Parent University
- Two Expert from Outside Parent University
- One Expert from Industry
- One Meritorious Alumni

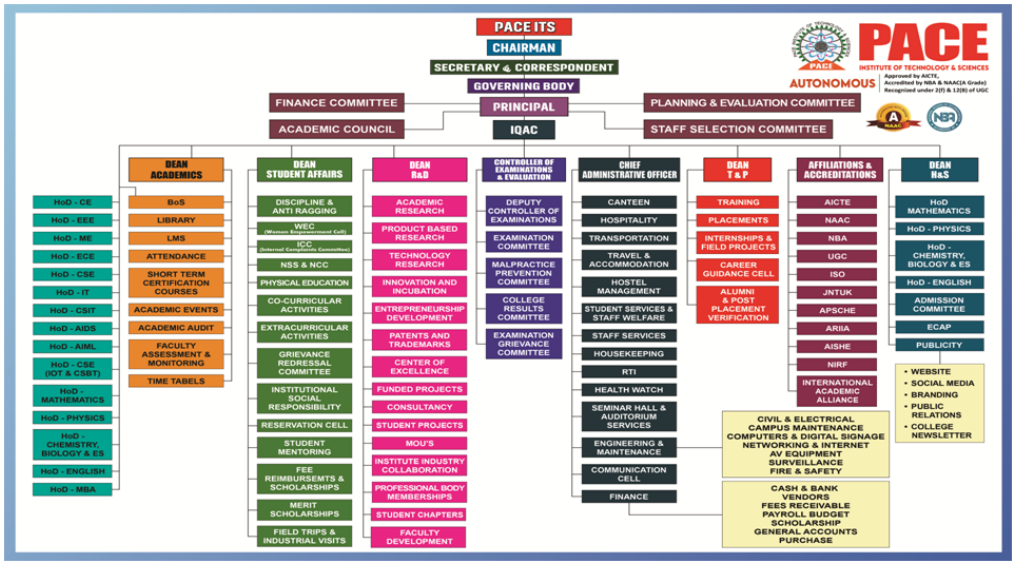
FINANCE COMMITTEE

Finance Committee is formulated to estimate budgets and monitor the financial transactions and the financial status of the institution.

Functions:

- To estimate budget relating to the grant received/receivable from UGC, and income from fees, etc. collected for the activities to undertake the scheme of autonomy
- To verify Cash inflows and outflows in all bank accounts
- To verify advances given and outstanding payments totals, receipts and payments
- To maintain all ledger books, preparation of salary statements
- To audit accounts for the above

Administrative set up: Following diagram depicts the brief administrative set up and the glance of committees in order to create and enhance the infrastructure that facilitate teaching and learning process.



PACEITS has a decentralized mechanism for delegating authority and providing operational autonomy to all the functionaries to work towards decentralized governance. It includes the Board of Governors, Academic council, Secretary and Correspondent, Principal, Board of Studies, Director, Dean Academics, Dean Student Affairs, Dean Research & Development, Administrative Officer, Dean Training & Placements, Controller of examinations and HOD's for effective Governance and participative management. Top management in consultation with the Board of Governors and Secretary & Correspondent gives strategic directions to the Principal regarding various future initiatives focusing broadly on the Vision and Mission of the institution. The principal prepares the action plan keeping in view the short-term and long-term goals of the institution and gets it executed through IQAC, various Deans, heads of the Departments, and other committees. Principal with various HODs nominated institute-level committees to the faculty members. The department-level committees are nominated by the respective Heads of Departments. All Administrative matters including Finance, campus maintenance, Canteen, Hostel Management, and scholarship is handled by Chief Administrative Officer. Student examinations were conducted by the Controller of Examination and Senior/Junior supervisors.

The service rules, policies and procedures are available in the website and are circulated to all the staff members. The meetings are conducted regularly and the minutes of the meeting with attendee's signature is filed properly. Every meeting starts with the review of the previous meeting minutes and the action taken on the discussed points.

10.1.4 Decentralization in working and grievance redressal mechanism (5) Institute Marks : 5.00

List the names of the faculty members who have been delegated powers for taking administrative decisions. Mention details in respect of decentralization in working. Specify the mechanism and composition of grievance redressal cell including Anti Ragging Committee & Sexual Harassment Committee.

GRIEVANCE REDRESSAL COMMITTEE

Grievance Redressal committee is formulated to investigate the complaints received from the students and faculties.

Functions:

- To formulate the policy to investigate and review complaints or grievances of students and faculties.
- To create awareness of availability of members for students and faculties to report grievances.
- To investigate the cause of grievances to ensure effectual solution.

S. No	Name	Designation
1	Dr. G V K Murthy	Chairmen
2	Mr. G Ramesh Babu	Convener
3	Dr. R Veeranjaneyulu	Member
4	Dr. A Seshagiri Rao	Member
5	Dr. D Suresh	Member
6	Dr. D Anil Kumar	Member
7	Dr. M Rajasekhar	Member
8	Mr. P Siva Prasad	Member
9	Mr. B Nagaraju	Member
10	Dr. G Kondaiah	Member
11	Mr. G Ganesh Naidu	Member
12	Dr. T Mary Jones	Member
13	Mr. M Raveendra	Member

ANTI-RAGGING COMMITTEE: Anti ragging committee is formulated to ensure a safe environment for first years that enter into the campus with high aspirations. This committee encourages healthy relationships between the students of different years and branches.

Functions of Anti ragging Committee:

- To initiate timely action against erring students of Discipline
- To maintain records of the cases investigated
- To sensitize students about the evils of ragging and its prevention in the College Campus by organizing talks/ programmes
- To address complaints about ragging as per the Govt. and University procedures

Composition of the committee:

S. No	Name	Designation
1	Dr. G. V. K. Murthy	Chairman
2	Mr. G. Ramesh Babu	Convener
3	Dr. R. Veeranjaneyulu	Member
4	Dr. D. Anil Kumar	Member
5	Ch. Ravindra Babu	Member
6	Dr. A. Seshagiri Rao	Member
7	Mrs. N. Vaishnavi	Member
8	Mr. K. Venkateswarlu	Member
9	Mr. B. Suresh Babu	Member
10	MR. S. Ch. Kantha Rao	Member
11	Mr. M. Sivudu	Member
12	Mr. S. Anka Rao	Member
13	Mr. Y. Srinivasa Reddy	Member
14	Mr. M. Naga Bhaskar	Member
15	Mr. I. Madhusudhan	Member
16	Ms. Sk. Heena Kauser	Member

INTERNAL COMPLAINTS COMMITTEE (SEXUAL HARASSMENT COMMITTEE): Internal compliance committee is formulated to ensure safe campus for girl students and lady staff members. The committee creates awareness programs for the girls about the presence of the cell and gives assurance to them that they will support them in all circumstances.

Functions:

- Registering the complaint and Taking necessary action to support the victim
- To receive the complaints regarding sexual harassment
- To investigate and submit the report against the complaints filed
- To educate all about sexual harassment and impacts

Composition of the committee:

S. No	Name	Designation
1	Mrs. N. Vaishnavi, Assoc. Prof, ECE	Convener
2	Mrs. K. Jeevana, Asst. Prof, EEE	Member
3	Mrs. P. Rama Lingamma, Asst. Prof, IT	Member
4	Mrs. Ch. Anusha, Asst. Librarian, Library	Member
5	Mrs. D. Annapurna, Lab Programmer, CSE	Member
6	Mrs. Bathini Arunakumari, External Member	Member
7	Ms. Sk. Amrin, UG Student, ECE	Member
8	Ms. Tanneru Sai Mahalakshmi, PG Student, MBA	Member

The Grievance Redressal Committee is formulated to investigate the complaints received from the students and faculties. The committee addresses the problems and ensures that the students are comfortable with all the teaching and learning processes and administrative procedures of the institution. The committee encourages the students and faculty members to share their grievances freely and on receiving the complaint, the committee investigates the problem and redresses it as soon as possible.

10.1.5 Delegation of financial powers (5) Institute Marks : 5.00

PACE Institute of Technology and Sciences has a well-established financial system. For the smooth functioning of the institutional activities the financial powers are delegated to different levels i.e. Secretary & Correspondent, the Principal, and the Heads of different departments. The principal can sanction any recurring or non-recurring amount which has prior approval in the budget.

Other than the prior approved budget items

To address any emergency situation Heads of the department hold hand cash of ten thousand. For any emergency requirements, the principal can sanction an amount of one lakh. The amount of more than one lakh can be sanctioned by the Secretary and Correspondent.

10.1.6 Transparency and availability of correct/unambiguous information in public domain (5) Institute Marks : 5.00

- All the information is available on the college website for the stakeholders. The right to Information Committee is also available in the institution to provide any information sought by any of the stakeholders.
- All the information related to staff and students is also made available on the website.
- All the mandatory disclosures to be displayed on the website are updated as per the instructions of AICTE/AISHE.

10.2 Budget Allocation, Utilization, and Public Accounting at Institute level (15) Total Marks 15.00

:

Total Income at Institute level: For CFY,CFYm1,CFYm2 & CFYm3
CFY : (Current Financial Year),
CFYm1 : (Current Financial Year minus 1),
CFYm2 : (Current Financial Year minus 2) and
CFYm3 : (Current Financial Year minus 3)

Table 1 - CFY 2022-2023

Total Income 202657090.04				Actual expenditure(till…): 198790890			Total No. Of Students 5691
Fee	Govt.	Grants	Other sources(specify)	Recurring including salaries	Non Recurring	Special Projects/Anyother, specify	Expenditure per student
198520200	0	0	4136890.04	189400590	9390300	0	34930.75

Table 2 - CFYm1 2021-2022

Total Income 194745749.46				Actual expenditure(till…): 192045749			Total No. Of Students 5245
Fee	Govt.	Grants	Other sources(specify)	Recurring including salaries	Non Recurring	Special Projects/Anyother, specify	Expenditure per student
190022936.66	2614510	0	2108302.80	185854976	6190773	0	36615.01

Table 3 - CFYm2 2020-2021

Total Income 183174271.23				Actual expenditure(till…): 178620223			Total No. Of Students 4855
Fee	Govt.	Grants	Other sources(specify)	Recurring including salaries	Non Recurring	Special Projects/Anyother, specify	Expenditure per student
178420366.85	0	1845785	2908119.38	176491113	2129110	0	36790.98

Table 4 - CFYm3 2019-2020

Total Income 167104584				Actual expenditure(till…): 152520345			Total No. Of Students 4556
Fee	Govt.	Grants	Other sources(specify)	Recurring including salaries	Non Recurring	Special Projects/Anyother, specify	Expenditure per student
164826053	0	0	2278531	151037107	1483238	0	33476.81

Items	**Budgeted in 2022-2023**	**Actual Expenses in 2022-2023 till**	**Budgeted in 2021-2022**	**Actual Expenses in 2021-2022 till**	**Budgeted in 2020-2021**	**Actual Expenses in 2020-2021 till**	**Budgeted in 2019-2020**	**Actual Expenses in 2019-2020 till**
Infrastructure Built-Up	2000000	169477(	150000(	1264982	2000000	1959402	1500000	6971444
Library	800000	645377	400000	171367	500000	0	1000000	704129
Laboratory equipment	9500000	939030(	650000(	6190773	2700000	2129110	1800000	148323E
Laboratory consumables	500000	461362	100000(	890019	250000	211817	800000	760762
Teaching and non-teaching stal	1450000	1440202	140000(	1364053	1250000	1194641	1000000	9893894
Maintenance and spares	4000000	3007013	520000(	5025890	2500000	2259283	5000000	480331E
R&D	1200000	104738(	120000(	1061590	550000	483325	900000	850295
Training and Travel	2000000	1672924	100000(	842673	2000000	1893021	2200000	213014E
Miscellaneous Expenses*	150000	91242	150000	140162	100000	92178	100000	97850
Others, specify	1770000	2150737	240000(	2866812	285170(	3249330	3376500	3578021
Total	**200850000**	**198790890**	**194450000**	**192045749**	**182117000**	**178620223**	**160565000**	**152520345**

10.2.1 Adequacy of budget allocation (5)

Institute Marks : 5.00

The institute collects the budget proposals from all the departments and cells before starting the financial year. The departments submit the budget proposals considering all the recurring (i.e. lab maintenance/repairs) and non-recurring (new purchases) requirements. All cells submit the proposals considering all their requirements. The Institute finance committee chaired by the principal prepares a draft budget statement considering the proposals from the departments, cells, salary requirements, and funds available. After the preparation of a draft budget, a review meeting will be conducted with all departments and cell heads with the principal and management. In this meeting, all will justify their proposals. After finalizing the budget values, it will be presented to the governing body for final approval.

10.2.2 Utilization of allocated funds (5) Institute Marks : 5.00

The allocated funds are utilized properly and are adequate as per the Academic requirements. The budget funds are utilized on a priority basis as per the requirements of each department based on the availability of funds. The finance committee monitors the utilization of allocated funds. Major heads are spent directly from the account section. However, all recurring and non-recurring expenditure of institute/departments is met in full (including salaries, lab consumables, miscellaneous expenditure, etc.) After the completion of every financial year, the budget will be audited by an external auditor to understand the reliability of budget utilization. The institution carefully monitors the expenses such that the necessities are met without affecting the smooth working of the institution. The management has been very efficiently and effectively doing this over the past several years and the institution never had any serious budget crunch that affected the normal functioning of the institution.

10.2.3 Availability of the audited statements on the institute's website (5) Institute Marks : 5.00

PACE ITS follows good governance. All the College accounts are taken care of by the accounting department, which will be audited periodically (every year) by Auditors. The budget allocation and utilizationare monitored by the finance committee. Supplementary allocations are made in special cases if needed.

The audited statements are available on the institute website on the finance committee webpage.

10.3 Program Specific Budget Allocation, Utilization (30) Total Marks 30.00

:

Total Income at Institute level: For CFY,CFYm1,CFYm2 & CFYm3
CFY: (Current Financial Year),
CFYm1 : (Current Financial Year minus 1),
CFYm2 : (Current Financial Year minus 2) and
CFYm3 : (Current Financial Year minus 3)

Table 1 :: CFY 2022-2023

Total Budget 2855000		Actual expenditure (till…): 2483778		Total No. Of Students 623
Non Recurring	Recurring	Non Recurring	Recurring	Expenditure per student
22,00,000	6,55,000	20,44,733	4,39,045	3986.80

Table 2 :: CFYm1 2021-2022

Total Budget 605000		Actual expenditure (till…): 508683		Total No. Of Students 612
Non Recurring	Recurring	Non Recurring	Recurring	Expenditure per student
1,00,000	5,05,000	85,733	4,22,950	831.18

Table 3 :: CFYm2 2020-2021

Total Budget 1385000		Actual expenditure (till…): 888696		Total No. Of Students 603
Non Recurring	Recurring	Non Recurring	Recurring	Expenditure per student
8,40,000	5,45,000	4,11,732	4,76,964	1473.79

Table 4 :: CFYm3 2019-2020

Total Budget 730000		Actual expenditure (till…): 630077		Total No. Of Students 588
Non Recurring	Recurring	Non Recurring	Recurring	Expenditure per student
2,40,000	4,90,000	2,35,382	3,94,695	1071.56

Items	Budgeted in 2022-2023	Actual Expenses in 2022-2023 till	Budgeted in 2021-2022	Actual Expenses in 2021-2022 till	Budgeted in 2020-2021	Actual Expenses in 2020-2021 till	Budgeted in 2019-2020	Actual Expenses in 2019-2020 till
Laboratory equipment	800000	741525	100000	85733	490000	108000	240000	235382
Software	1400000	1303208	0	0	350000	303732	0	0
Laboratory consumable	60000	35745	50000	31450	50000	41209	15000	12945
Maintenance and spares	50000	41500	50000	45000	50000	48560	50000	38750
R & D	170000	100000	70000	66500	100000	94295	150000	108000
Training and Travel	360000	251800	320000	268000	330000	282900	260000	225000
Miscellaneous Expenses*	15000	10000	15000	12000	15000	10000	15000	10000
Total	**2855000**	**2483778**	**605000**	**508683**	**1385000**	**888696**	**730000**	**630077**

10.3.1 Adequacy of budget allocation (10) Institute Marks : 10.00

Before the beginning of every financial year, the institution's finance committee chaired by the principal invites budget proposals from various departments.

The department budget coordinator collectsinformation regarding budget proposals from the staff and lab in-charges. The staff and lab in-charges submit their proposals considering various factors lab equipment, software, lab consumables, maintenance and repairs, travel and training, etc.

The department budget coordinator prepares a draft budget considering all the proposals.

Before submitting the budget proposal to the institute finance committee, the department conducts a meeting chaired by the Head of the department to look into the budget proposals.

After the Head of the Department is satisfied with all the proposals, it is presented to Program Assessment and Quality Improvement Committee (PAQIC) for suggestions.

After incorporating all feasible suggestions, the budget is submitted to the institute's finance committee. After receiving all the budget proposals, the institute finance committee conducts a review meeting to consider the justificationfor department proposals.

After considering all the department requirements and funds available the finance committee sanctions head-wise amounts to the department.

10.3.2 Utilization of allocated funds (20) Institute Marks : 20.00

The department utilizes the funds allotted for various items effectively. The head of the department monitors the utilization of recurring and nonrecurring funds. The head of the department frequently reviews the funds utilized to estimate the remaining work to be carried on. In contingency, the head of the department holds cash of ten thousand, for which after the utilization, bills will be submitted to the Central Administrative office for transparency in transactions. The department also presents the budget sanctioned and utilized in the Program Assessment and Quality Improvement committee (PAQIC) for review. At the end of every financial year, the institutional budget which is a consolidation of all departments is audited by external auditors, andaninternal financial audit is conducted to estimate the appropriateness of the funds utilized.

10.4 Library and Internet (20) Total Marks 20.00

10.4.1 Quality of learning resources (hard/soft) (10)

Institute Marks : 10.00

- Availability of relevant learning resources including e-resources and Digital Library (7)

  Pace Institute of Technology and Sciences has a spacious and comfortable library to facilitate the student's and staff for their learning. Pace Library provides all the required learning resources including e-resources and Digital Library. It is filled with many volumes of books, print and online journals, e-books, magazines, CDs & DVDs, M. Tech Dissertations, etc., The library has access to e-journals in IEEE-ASPP, DELNET, IEI, and N-LIST(INFLIBNET).

- Accessibility to students: The library has provided all the facilities for the students and faculty to enhance their learning. The library is available from morning 8.00 AM to evening 8.00 PM for the students and staff. It is available on Sundays and holidays from morning 9.00 AM to evening 1.00 PM.
  - Circulation Service
  - Reference Service
  - Clipping Service
  - Internet Service
  - Reprographic Service
  - OPAC

10.4.2 Internet (10)

Institute Marks : 10.00

Internet Is provided by INRI Communications and BSNL. The available bandwidth is 150 MBPS from INRI Communications and 40 MBPS and 40 MBPS from two lines of BSNL. Wi-fi facility is available throughout the campus by INRI Communications. The internet is made available through LAN connections for all the labs, offices, and digital libraries and a wi-fi facility is available for all common areas in the campus like class rooms, corridors and ground. The internet is highly secured with efficient Firewall Sophos XG 330.

Annexure I

(A) PROGRAM OUTCOME (POs)

Engineering Graduates will be able to:

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

2. 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.

3. 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.

4. 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.

5. 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.

6. 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.

7. 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.

8. Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

9. Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

10. 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.

11. 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.

12. 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.

(B) PROGRAM SPECIFIC OUTCOME (PSOs)

Program should specify 2-4 program specific outcomes.

PSO1	An ability to isolate and solve complex problems in the domain of Electronics and Communication by selecting appropriate hardware and software tools.
PSO2	An ability to design, develop and validate inter disciplinary products, process by applying the knowledge and skills of Signal Processing, Embedded Systems, VLSI, Networking and Communication Engineering.

Declaration

The head of the institution needs to make a declaration as per the format given -

- I undertake that, the institution is well aware about the provisions in the NBA's accreditation manual concerned for this application, rules, regulations, notifications and NBA expert visit guidelines inforce as on date and the institutes hall fully abide by them.
- It is submitted that information provided in this Self Assessment Report is factually correct.
- I understand and agree that an appropriate disciplinary action against the Institute willbe initiated by the NBA. In case, any false statement/information is observed during pre-visit, visit, postvisit and subsequent to grant of accreditation.

Head of the Institute
Name : Dr. G. V. K. Murthy
Designation : Principal
Signature :

Seal of The Institution :

Place : Ongole
Date : 01-04-2023 18:55:09